VOL. VII, No. 9 NOVEMBER, 1915

THE Journal of Home Economics

For those interested in Homemaking, Institution Management, and Educational Work in Home Economics

MRS. ALICE P. NORTON, *Editor* KETURAH E. BALDWIN, *Managing Editor*

Editorial Board

MRS. MARY H. ABEL ANNA BARROWS C. F. LANGWORTHY ISABEL ELY LORD

Ex Officio Members—MARTHA VAN RENSSELAER, President American Home Economics Association
SARAH LOUISE ARNOLD, Chairman Institution Economics Section
RUTH WHEELER, Chairman Science Section
GERTRUDE MCCHEYNE, Chairman Extension Section

Collaborators—The Officers, Members of the Council, and Advisers

CONTENTS

PRESIDENT'S ADDRESS . . . . . *Martha Van Rensselaer* 461

NEED FOR UNIFORM LEAFLETS FOR EXTENSION WORK IN HOME ECONOMICS *C. F. Langworthy* 465

RECENT CONTRIBUTIONS TO THE FOUNDATIONS OF DIETETICS . . . . *Ruth Wheeler* 469

THE WINTHROP FARM SCHOOL . . . . . *Hetty S. Brown* 480

HOMES . . . . . *Flossie Cranwell Means* 484

BUSINESS TRAINING FOR WOMEN . . . . . *Ethel M. Johnson* 485

THE COMMUNITY ORGANIZED FOR NEIGHBORHOOD PATRIOTISM 490

HOME ECONOMICS DAY AND ITS OBSERVANCE 491

EDITORIALS 494

HOUSEKEEPERS' DEPARTMENT 497

ELECTRIC VACUUM CLEANERS . . . . . *M. E. Cooley* 497

PERSIMMON RECIPES 499

THE MISCHIEVOUS WIPING CLOTH 501

PURCHASING MEAT 502

BIRD POPULATION LESS THAN IT OUGHT TO BE 505

HEAT, HUMIDITY, AND WORKING POWER 506

BIBLIOGRAPHY OF HOME ECONOMICS 507

BOOKS AND LITERATURE 509

NEWS FROM THE FIELD 513

The Journal of Home Economics is published ten times during the year—monthly except July and August—by the American Home Economics Association.

$2.00 A YEAR. FOREIGN $2.25. SINGLE COPIES 25 CENTS

HOW TO REMIT. Remittances should be sent by Draft on New York, Express Order or Postal Money Order, payable to the American Home Economics Association. Currency, unless mailed in a registered letter, is at the sender's risk.

CHANGE IN ADDRESS. Notice of change in address should be sent Two Weeks before the date of issue on which the change is to take effect. The subscriber's Old Address should be clearly indicated in addition to the New Address.

AMERICAN HOME ECONOMICS ASSOCIATION STATION N, BALTIMORE, MD.

Entered as second class matter at the Baltimore Post Office

House and Garden

A Class on the Veranda

WINTHROP FARM SCHOOL, ROCK HILL, S. C. (see page 480)

THE
Journal of Home Economics

VOL. VII NOVEMBER, 1915 No. 9

PRESIDENT'S ADDRESS[1]

MARTHA VAN RENSSELAER

Cornell University

If Mrs. Richards and the persons who were early concerned in the education of women for home makers had been told at the first Lake Placid meeting, that we should be two or three hundred strong upon the Pacific coast in 1915, there would have been not only great surprise, but wonderful gratitude. We evidently have started around the world from our meeting in Boston some years ago to the present meeting and perhaps a future meeting will be in the Philippines. We are perfectly willing to go around the world with Home Economics, and there is no more fitting subject to encircle the world than Home Economics.

How has it come about that we are in the elementary stages of Home Economics education when our foremothers knew so much about it, and it was the only education which they had; when they were the forerunners of household art and of science, though they did not know it? In primitive days savage men went out to fight and women stayed at home to cook, to make the raiment, and promote rudimentary agriculture; thus agriculture started as homemaking and whatever contributed to the welfare of the home was homemaking.

The story is a familiar one. The savage chief in chase and defense, his savage wife the originator and producer of utensils and foodstuff; the calling of men to pastoral life and the women to smaller agricultural pursuits; later, home manufacture of food and clothing in which the family have shared, the traveling cobbler and gradual

[1] Presented at the Eighth Annual Meeting of the American Home Economics Association, Seattle, 1915.

exchange of home made goods, the division of labor in which man took the agriculture and women the preparation of food, clothing, and the cultivation of home arts;—later, the development of machinery and the disappearance of home arts and economic justice in the family when each person was self-supporting; the organization of merchant gilds, and trades unions; the necessity of factory employment for women and children. Women and children entered this field untrained and serving as they always have the interests of employer and working with a possible idea of change to homemaking, they made a business of neither homemaking nor industrial work.

Then came the age of chivalry when by military command women and children were protected. With this came the age of romance, luxury, and sensuousness because without training or schooling women must appeal by their beauty, charm and ability to care for the welfare of man.

Then there came the revolution, the reformation and renaissance and as in every great revolution women grew in judgment and responsibility. Individualism asserted itself no less in women than in men. To cook, to sew, to clean, to keep accounts, to pray, to sing, did not then as it does not now satisfy women. The convents offered some education but not to all. Comenius, Erasmus, Rousseau dared to proclaim that women should be admitted to public education. Why go to school to cook, to sew, to spin when mothers had taught these arts always. Education in Home Economics was not then developed; science and art had not been applied to domestic affairs. It was taken for granted then and we have a similar surviving custom that girls need know no more than their mothers about housekeeping, and schools for that purpose were unnecessary. It was a more reasonable argument then when mothers and daughters were associated in household duties and when household servants were not common. Science was not ready for application to common things of the household; the science then offered to woman was not the science of bacteriology that would teach her how to keep the kitchen sink clean; it was not the science of chemistry that would teach her to make bread. To apply science to the life which the women would probably have to live was not considered. Teaching and housework were the main vocations offered to women. During all the time that work was finding its way into the factory, women and girls were left stranded should they wish to earn anything outside of factory life or teaching subjects which they had in school. For the work which was done

in the home, untrained workers were employed, and housework became unstandardized. Soon the world went wrong so far as domestic affairs were concerned, and people began to worry about the work of the household, and about the inefficiency of the workers. Women were advancing in literary training and going further and further from domestic education. Thus woman's work and education were separated.

Occasionally we hear of a woman who in early days was of special service to science. The rare exception was a woman who was interested in the stars or a similar quest.

The American Revolution brought about another state of uneasiness. The wives of John Quincy Adams and of James Madison, and other prominent men wrote and plead for woman's opportunity. Catharine Beecher, Mary Lyon, and Emma Willard gave their all to have the schools opened to women. When they were opened it was not to teach cooking and sewing, for mothers had taught it before; it was for that which women had not had in their lives. Later women's colleges were opened in the East. Again it was thought that higher education for women must not embrace what mother could teach at home. That was not what women were craving. It was language, history and mathematics—so called cultural subjects.

Agriculture, and mechanical arts have suffered the same historical record as Home Economics. Work with the hands even with the application of science has been termed manual and that direct from the book, cultural. Manual in some cases however came to be called menial. This led to a domination of the cultural as opposed to the noncultural subjects and a supposed corresponding difference in social importance.

To remove this stigma is the opportunity of the Home Economics teacher who regards the social phenomena from the study of food, shelter and clothing of importance equal to the material results.

To dignify the subjects by high aims, thorough knowledge, scientific research, economic and social justice is to make it worthy of any good institution of learning.

Agricultural colleges were established over the country. Domestic science became a part of the curriculum. Where this work was established at a university, men devoted to arts held up their hands in horror at what they termed "cooks on the faculty." But the subject prospered. High schools introduced Domestic Science in the same way and even there a line of demarkation has been drawn be-

tween the art students and those preferring vocational subjects, though this need cause no regret, for each needs the criticism of the other.

In all this history, education has too often been separated from work, to the disadvantage of both and with the result that in domestic affairs, work is unstandardized. With the removal of work outside the home, the lack of standardization in the home, and the unfortunate attitude toward housework because of this lack of training, we have an economic condition which threatens to revise our whole home fabric. Rooted deep in the hearts of the people, the home is secure but only with a better and more scientific foundation. While we condemn false standards and uneconomic home conditions we realize more than ever the need of an intimate home life for the happiness of men and women and the good of the children. It is only a question of revision and redefinition.

The old methods of homemaking have not satisfied women's ability. Education of the past has not pointed out the home as a laboratory for the science and art of the school, and woman has looked outside for her professional experience. Home Economics unlocks a vast and interesting laboratory and the result of the use of that laboratory is greater efficiency and a higher type of civilization, for "good citizenship is but an expansion of home ideals."

In the use of such a laboratory a teacher of Home Economics must be familiar with home problems as they exist for her and for those whom she teaches. Her single life adds to the incompatibility of teaching and living, which tends to separate education from work. Again there is an incompatibility between married and professional life because of the outside demands upon the time of the professional worker. The more the pity that this is so because it keeps a selected group of women out of marriage and motherhood where intellectual training is needed for the good of the race. Again the teachers of the world who would impress standards upon the coming generations should not be divorced from the practical work of the world of homemaking.

The purpose of Home Economics is to standardize home ideals. But since the home is the nucleus of all social life, the problems of Home Economics are not only those of the home but of the community. The ideals of community, state and nation all reflect back to home standards. I congratulate a body of teachers whose work is to standardize and professionalize the home.

NEED FOR UNIFORM LEAFLETS FOR EXTENSION WORK IN HOME ECONOMICS[1]

C. F. LANGWORTHY

Office of Home Economics, U. S. Department of Agriculture

The subject matter of Home Economics is the oldest in the world, but as a definite branch of learning the subject is very new. Yet it has been experimented with long enough to convince those who are familiar with it that it possesses all the elements of culture which the most exacting could wish, and that it has a further advantage in that it deals with matters of everyday life and so teaches the student how to live. The content of the subject is large. Its subject matter of necessity forms a part of kindergarten teaching (witness the stress which is laid upon these matters in a method of education for young children which is now attracting so much attention), parts of it are admirably suited for grade school and high school work, and it fills with dignity its place in the college and university, while other parts of the subject matter find their best application in the technical school and trade school.

The last few years have witnessed a great increase in the efforts to supplement formal education by less formal education taken directly to the people. It is natural that extension education in agriculture should occupy a prominent place in such a program, for agriculture is fundamentally related to the life of all the people. It is equally natural that Home Economics should accompany agriculture, for the home is the ultimate consumer of most of the products in agriculture. That the probationary period of extension education in agriculture and Home Economics is over is clearly evidenced by the passage of the Smith-Lever Act which now provides for such work under most generous conditions in every state of the Union, a project so far reaching in its possibilities that one can hardly see the limits of its usefulness.

While extension teaching in Home Economics is somewhat new in the United States, it has nevertheless made some considerable progress. The work grew up in different places and under different auspices, and so it is not surprising to find that materials and methods used in the work have also varied. Now that the Smith-Lever Act

[1] Presented (by title) at the Eighth Annual Meeting of the American Home Economics Association, Extension Section, Seattle, 1915.

has given so great an impetus to the work, it is important that those interested in it should take stock of their resources and plan for their future needs. One of the most important of these is an adequate supply of literary material on which to draw for purposes of instruction—literary material which embodies not only the housewife's experience but the results of laboratory test and technical studies. There are many technical works of reference on Home Economics and many text books, on one phase or another, suitable for classroom instruction and a very large number of books and pamphlets, some of them excellent, prepared for grade school use and for similar purposes. Some few of these deal with the general principles of Home Economics, usually laying stress particularly upon food and nutrition, textiles and clothing, and hygiene and sanitation. The simpler ones very often are limited to cooking and sewing with brief excursions into other matters. It is not too much to say that there is no complete and uniform series of texts which deal with the whole question of Home Economics. This is not surprising when one recalls the newness of Home Economics as a pedagogical subject and the great extent of the material which can properly be included in it. The *Syllabus of Home Economics*, which represents coöperative work between this Association and the Department of Agriculture, may be cited in proof, for the date of this, the first reasonably complete synopsis, is 1913, and the list of topics it includes is a very long one.

No one will deny that the extension teacher needs an abundance of printed material. Furthermore, it must be concise, stated in simple language, and well balanced. Is it not possible for us to select from existing material, to experiment for additional facts, and prepare the texts which are needed? If we will all work together we can certainly better existing conditions and succeed.

Naturally the form of the material must be decided upon before such an enterprise can go very far. The leaflet for instruction purposes seems to have been in the minds of many workers and this is natural since it is familiar to every one and has proved itself of the greatest value in Sunday School work where it has been developed systematically and has been used for something over forty years. I think the majority will agree that it is the best form of printed material for general use in extension work.

(Those who think of "chance and circumstance" may be interested to recall that the leaflet plan is theirs by inheritance, for it owes its

adoption in Sunday School work to Dr. Peloubet, father of Mrs. Alice Peloubet Norton who will, I am sure, share it with us and help us to make the best use of it.)

The ideal which we should have in mind if we are to carry out the plan consistently, calls for a series of leaflets covering the whole field of Home Economics as outlined in the *Syllabus of Home Economics* or an extension of it, which the future will no doubt bring forth. This would mean a very large number, since in many instances several leaflets per topic would be required. Also different leaflets would be needed for use in different regions. For instance, leaflets designed for the Southern States would necessarily deal with products which are common there but unknown or not common in the North and those designed for instruction in remote rural regions far from markets would differ from those for villages and towns with numerous and well stocked shops. However, one should not be appalled at the task, for what is most needed must be given attention first and much that is very urgent can be prepared without great difficulty. With so many workers in the field there is no reason why the output of teaching material should not keep pace with the development of the work.

If we should agree that it is desirable to adopt such a plan as the one suggested, ways and means must be considered. The first step would be a collection of existing material used in extension teaching. Each extension worker should be requested to contribute whatever she has, whether manuscript or printed matter, and to accompany her material by notes which relate her experience with it—whether the material has been found adequate, how much interest it has aroused, what changes she would suggest, what she considers should be the maximum length for a leaflet. She should be asked also to enumerate the topics which the workers most need to discuss. Efforts should also be made to collect school texts, which are already so numerous, and also the popular pamphlets such as those issued by the General Government and in connection with state work; for instance, the Department of Agriculture Farmers' Bulletins, and the *Reading Course for Farmers' Wives*, issued at Cornell. Then, too, we must remember that very valuable material in form as well as in substance has appeared from time to time in publications of agricultural experiment stations, pure food laboratories, state boards of health, and similar agencies. And there are the publications of the Home Eco-

nomics departments of the General Federation of Women's Clubs and of the National Grange. Wherever there are workers, we must enlist their coöperation. Much of the material referred to has been prepared for gratuitous distribution. There are also the numerous text-books which have appeared in the regular publishing trade and the material appearing in periodicals—popular, scientific, and technical. The material could be brought together and classified. Out of this mass of material some competent body should select the models which are most promising and should plan a campaign which would result in securing additional material. The committee could then decide upon a list of topics which should first receive attention and make definite suggestions as to the length of the articles, their content, etc., and by means of circular letters could call for volunteers to prepare the articles or could ask individuals who are known to be especially familiar with different phases of the work to do so.

The committee would then be faced with the task of editing the material in order that it might be reasonably uniform and should adopt every available means to make sure that the language is simple and the statements accurate, that no points are overemphasized, that proper balance is maintained, and that all principal points are taken up instead of one or two which a writer may have especially in mind. After the editorial work would, of course, come the question of publication.

If carried to anything like a successful conclusion, such a project would result in the accumulation of a large amount of material and call for very large editions. No agency could handle such a matter as this so well as the General Government which would seem the natural publisher of the work. Since it already fosters the greatest organized effort for extension education which exists (the work done under the Smith-Lever Act), it seems logical that it should provide the printed text for use in its own work.

Cannot agricultural colleges, experiment station workers, teachers in public schools, the Department of Agriculture workers, and others unite in this enterprise? If we group these together, would it not mean coöperation between the American Home Economics Association and related organizations, and the Department of Agriculture, which by law is charged with the Smith-Lever Act? It would seem that every one having an interest in extension work in Home Economics would wish to help such a plan as this in every way possible.

RECENT CONTRIBUTIONS TO THE FOUNDATIONS OF DIETETICS[1]

RUTH WHEELER

Department of Household Science, University of Illinois, Urbana, Ill.

There was a time when the science of dietetics was hampered in its development by the lack of accurate information about the processes of nutrition. It had to wait for physiology and physiological chemistry. Now, the difficulty is rather to acquire even the most superficial acquaintance with the discoveries reported in January publications before those of February are upon us. Digestion and assimilation of the material are all but impossible and yet both must be accomplished if our science is ever to be the supremely important division of classified human knowledge it should become. This subject should include preventive dietetics which shall be first assistant to eugenics in perfecting the race, and curative dietetics which shall to a considerable extent replace what the medical association has called unnecessary and probably dangerous drugs, in remedying disorders of metabolism. Even now, it is often possible by dietetic measures alone to cure such difficulties as hypo- and hyper-acidity, gastric and duodenal ulcer and many other disorders; decrease greatly the seriousness of typhoid fever, diabetes melitus and gout. It is evident that for its optimum development, dietetics must in the first place have the close coöperation of workers in many lines: chemists, physiologists, physicians, dietitians, government experts, food manufacturers, teachers and housekeepers; and secondly it must assimilate as promptly as possible the accomplishment in all the fields indicated.

The last year has been a prolific one in spite of the lessened output of European laboratories. Discussion of the whole field is out of the question—there is far too much of it; and so in order to unify the material somewhat, only such investigations have been considered as are related more or less closely to two topics which have stood out conspicuously in the year's literature: energy exchange and growth.

On the food side of energy exchange, there has been one notable contribution—Gephart's ***Analysis and Cost of Ready to Serve Foods,*** in which 242 individual portions of cooked foods as served by Childs Restaurants are analyzed, their fuel value determined, and a table

[1] Presented at the Eighth Annual Meeting of the American Home Economics Association, Science Section, Seattle, 1915.

given showing the relative cost of 2,500 calories in various food combinations from baked beans and bread and butter to deviled crab.

There have been so many arguments about the amount of food the body requires, so much discussion of the Atwater standard and the Chittenden standard, that it is a relief to find as great an authority as Graham Lusk giving figures which he says "are facts which at the present time are scarcely open to dispute."[2]

Daily caloric requirements of 156-pound man

	Calories
Absolute rest in bed without food	1,680
Absolute rest in bed with food	1,840
Rest in bed, 8 hours, sitting in chair 16 hours, with food	2,168
Rest in bed, 8 hours, sitting in chair 14 hours, walking 2 hours, with food	2,488
Rest in bed 8 hours, sitting in chair 14 hours, with vigorous exercise 2 hours, with food	2,982

As these figures indicate, the amount of fuel needed by the body depends first upon the activities of the whole organism, of the body as a unit; not only upon whether one does hard labor or leads a sedentary life but upon less obvious considerations brought to our notice by the very valuable work being done in the calorimeters in the Carnegie Nutrition Laboratory, the Russell Sage Institute, and elsewhere. A clerk who works sitting down needs less food than one who does the same work at a high desk, standing. Murlin and Hoobler[3] find that hard crying increases the metabolism in babies 40 per cent. Cold baths use up the body's glycogen reserves which must be replaced by more food. All this does not mean that we must watch every muscle and compute the number of calories we must provide for the next motion, but it does mean that it is quite as serious to keep too close to the minimum as to overeat; it means most of all that there is accumulating accurate information on which to base calculation of dietaries, especially for two classes of people: those who must perforce eat what is set before them—babies and inmates of some institutions; and those whose incomes preclude the possibility of much margin.

The food requirements depend largely upon the activities of the body as a unit but quite as largely upon the activities of the indi-

[2] F. C. Gephart and G. Lusk: Analysis and Cost of Ready to Serve Foods. Chicago: Amer. Med. Assoc., 1915, p. 15.

[3] J. R. Murlin and B. R. Hoobler: *Amer. Jour. Diseases Children*, 9 (1915), no. 2, pp. 81–119, figs. 10.

vidual cells which make up its tissues, that is upon a group of factors which influence its *basal metabolism*, the activity of the cells when the body as a unit is at rest. Here again there is a great need for definite data as opposed to supposition based on teleological reasoning. There is some reason to assume that cells are more active in children than in elderly people; that men need more food than women of equal weight living the same lives; that much protein is needed for growth—but, oh, for proof! Prof. Martha Tracy[4] of the Women's Medical College of Philadelphia found that the basal metabolism of women, measured by the creatinin output on constant diet, *was* lower than that of men except in the case of some athletic women in whom it was closely similar to the average for men. The initial loss of weight in new born babies has this year been studied with real accuracy of method. Benestad[5] of Christiana found it to be due to insufficient metabolism and to be remedied to some extent by supplemental (bottle) feeding. Bailey and Murlin[6] have gone further. By actual determinations in the calorimeter of the baby's needs on the one hand and on the other of the food value of the colostrum, the first milk secreted by the mammary glands of the mother, they have found that even with perfect utilization the baby cannot get sufficient food to prevent loss of weight. In most cases the loss is temporary and slight and is compensated by later overgrowth, but in some cases it is serious, and in all the babies studied, it could be lessened and the return to birth weight hastened by supplemental feeding with a liquid resembling the colostrum in composition. The trouble here is due less to low power to metabolize than to underfeeding.[7]

These facts are valuable in themselves but to us who want to use them in application, as part of the basis of the coming science of dietetics, perhaps the accuracy of method is even more appealing than the results. One feels quite sure that the metabolism work of today has permanence and will make a good foundation.

One of the most useful foundation stones is the determination of the basal metabolism in man, the total activity of the tissues when the body is at rest, by measuring the amount of oxygen used up, the

[4] Martha Tracy and E. Clark: *Jour. Biol. Chem.*, 19 (1914), no. 1, pp. 115–117.

[5] G. Benestad: Jahrb. Kinderheilk., 80 (1914), no. 1, pp. 21–41.

[6] H. C. Bailey and J. R. Murlin: *Proc. Soc. Expt. Biol. and Med.*, 11 (1914), no. 4, pp. 109–111.

[7] T. B. Robertson: *Amer. Jour. Physiol.*, 37 (1915), no. 1, pp. 74–85.

amount of carbon dioxide formed, the nitrogen excreted, and the heat generated by the body. The amount of the basal metabolism must depend upon the total amount of active tissue,[8] muscular, glandular and so on, not including fat which is not active. The fat person needs less food than the thin one of the same weight and leading the same life. Theoretically that is reasonable; but how shall it be expressed; in terms of weight or in terms of area of body surface? Neither will be quite accurate. Several papers published this year indicate that for adults the metabolism is best expressed and therefore the necessary food best computed in terms of area of body surface—34.7 calories per square inch.[9] The Doctors Dubois[10] of Bellevue Hospital and Russell Sage Institute of Pathology have worked out an accurate formula for computing surface area, but it is far from simple or easy to use. Perhaps simplicity is impossible. Fortunately for mothers, Murlin and Hoobler[3] find that for babies there is less error in computing the amount of food needed on the basis of weight than in using surface as the basis. Benedict and Talbot[8] concluded that neither weight nor surface is really satisfactory.

An exceedingly interesting outline of the development of calorimetry since 1850, is given by Prof. Graham Lusk[11] in a recent paper.

The plane of metabolism, i.e., the ordinary activity of the tissues when the body is at rest, is, however, definitely influenced by several factors. *Exercise*, for example, not only creates a demand for more fuel to supply the immediate need, but it has a lasting effect upon the activity of the cells, i.e., on the basal metabolism. Dr. Tracy's data concerning metabolism in women lead one convincingly to this conclusion, and a dog used by Dr. Lusk in metabolism work showed a higher basal metabolism in the autumn after an active summer.[12] One might say that a person who lives a muscularly active life is altogether more alive—his cells are more active. (There is much more evidence in favor of this view.) *Disease* also alters the plane of basal metabolism. Diabetes mellitus increases it 5–10 per cent, and even,

[8] F. G. Benedict and F. B. Talbot: The Gaseous Metabolism of Infants, *Carnegie Inst. Washington*, Pub. 201 (1914), pp. 168, figs. 65.

[9] F. G. Benedict, L. E. Emmes, P. Roth and H. M. Smith. *Jour. Biol. Chem.*, 18 (1914), no. 2, pp. 139–155; 20 (1915), no. 3, pp. 253–262.

[10] F. C. Gephart and E. F. Dubois: *Arch. Int. Med.*, 15 (1915), II, pp. 835–867. D. and E. F. Dubois: *Arch. Int. Med.*, 15 (1915), II, pp. 868–881.

[11] G. Lusk: *Arch. Int. Med.*, 15 (1915), II, pp. 793–804.

[12] G. Lusk: *Jour. Biol. Chem.*, 20 (1915), no. 4, pp. 555–617, pls. 15.

in individual cases, 15 per cent.[13] Typhoid fever involves 40–50 per cent increase.[14] No wonder the death rate from typhoid was so high in the days when this tremendous need for fuel was supplied by giving less than half the food used in health! Only the patient with large reserve could survive.

Food also affects the plane of basal metabolism. The increased heat production after eating, called the specific dynamic action of foodstuffs, has been variously explained. Voit (1881) thought it due to the stimulation of the cells by the presence in the fluid about them of products of digestion; Rubner held that basal metabolism was constant, fed by the end products of digestion, glucose especially, and that the increased combustion evident after a meal was due to the intermediary changes necessary to transform the food or the products of alimentary digestion into the simple forms which the cells could use—as if a furnace burned coke only and the coal were partially burned outside it, wasting so much of its heat, until coke was formed. Zunz taught that the specific dynamic action of foodstuffs was all due to the work of digestion, and so convincing was his argument that many of us even now have remnants of that idea in the back of our minds: that some foods are harder to digest than others and so cause the evolution of more heat; and yet Benedict and Emmes[15] in 1912 and Benedict and Pratt[16] in 1913 demolished that theory.[17]

In the presidential address[17] cited, and in a paper on this specific subject, Professor Lusk[12] reports investigations that settle the question and provide another perfectly solid foundation stone. By giving separately glucose and various substances (amino acids) formed by the digestion of protein, Lusk and his coworkers have proved that the specific dynamic action of foodstuffs is due to the action of katabolites of those foodstuffs, thus confirming and extending Voit's view. The argument is most interesting but we can consider only results. When the digestion products of fat or of carbohydrate are carried by the blood to the tissues, basal metabolism is increased, the activity of the cells is greater, just because of the presence of a

[13] F. G. Benedict and E. P. Joslin: Metabolism in Diabetes, *Carnegie Inst. Washington*, Pub. 130 (1910), pp. 234.

[14] W. Coleman and E. F. Dubois: *Arch. Int. Med.*, 15 (1915), II, pp. 887–938.

[15] F. G. Benedict and L. E. Emmes: *Amer. Jour. Physiol.*, 30 (1912), no. 3, pp. 197–216.

[16] F. G. Benedict and J. H. Pratt: *Jour. Biol. Chem.*, 15 (1913), no. 1, pp. 1–35.

[17] G. Lusk: *Jour. Biol. Chem.*, 20 (1915), no. 4, Proc., pp. VIII–XVII.

large amount of fuel; the products of protein digestion also stimulate metabolism but in a different manner and to a much greater degree, acting as direct stimuli rather than as fuel.

GROWTH

A large proportion of the problems of nutrition are being approached from the standpoint of growth: the optimum percentage of protein in the diet for example, the comparative value of different proteins, the extent to which protein synthesis is possible in the animal body, mineral metabolism, the nutritive importance of fats and the fascinating but still very hazy problem of accessory substances, lipoids, lipins, vitamins.

Growth is not entirely a matter of proper food; the growth impulse is inherent in the cell and seems to be influenced by the secretions of some of the ductless glands; but without proper building material growth is impossible and animals stunted far beyond the ordinary growth period of their species have made up for lost time and attained normal adult size and weight when proper food was given.

As yet we know very little about the character of growth. Professor Robertson[18] of Berkeley has recently published an extremely interesting study of growth in the human infant. He finds that growth proceeds in cycles as is the case in other animals; that some post natal loss of weight or at least a decreased rate of gain is characteristic of the baby as of all mammals; that the body is in "dynamic equilibrium," disturbances in growth being rectified by internal regulation, a period of subnormal growth being followed by compensatory overgrowth—a phenomenon familiar in studies of growth in animals.

Views of growth have developed most interestingly since attention has been directed to the bearing of nutrition upon it as is evident in the historical outline prefaced to Professor Mendel's[19] Harvey lecture last winter. Voit, in his great pioneer discussion of the subject in 1881, said that the growth period was characterized by great constructive power, slight destructive activity, and the need for a large amount of food, especially of protein. He thought the food passed from the

[18] T. B. Robertson: *Amer. Jour. Physiol.*, 37 (1915), no. 1, pp. 142; 74–85.

[19] L. B. Mendel: *Jour. Amer. Med. Assoc.*, 64 (1915), no. 19, pp. 1539–1547, figs. 5.

digestive tract to the tissues practically unchanged. Rubner, some twenty years later, in the light of investigations carried on in the meantime, asserted that all the characteristics of growth mentioned above had been over-emphasized. His own studies showed that for a baby, only 7 per cent of the total energy intake need be protein (5 per cent for maintenance). He pointed out the importance of the total energy intake and said that growth takes place just as soon as there is more building material at hand than is needed for the replacement of wornout tissue—a view that has received confirmation from some work of Dr. McCollum[20] this year.[21] Abderhalden attacked the problem of the form in which building material reaches the cells and did a great deal toward establishing our present view—that the cells know nothing of the food we eat, since digestion involves profound changes. Folin, Denis and Van Slyke continued the gathering of material which forms another important foundation stone. Only small fragments of the food reach the cells: glucose and other simple sugars from the starch, amino acids and perhaps small combinations of these from the protein, and so on. The final proof of this comes in the feeding of nothing but these products of digestion, a very difficult laboratory problem. Abderhalden has accomplished it, however, and his animals gained weight on the diet. Dr. Mitchell[22] at the University of Illinois fed such food to mice with excellent results so far as maintenance is concerned. He has not yet secured growth, I think.

There is no doubt that if we want to know whether wheat proteins are as valuable for growth as the proteins of milk or of meat or of oats, the answer lies in their amino acid content. Cane sugar is a simple thing, relatively; in digestion it is broken down into two kinds of building units or fuel units, which the cells can use (one kind probably has to be changed a little first), but protein is a whole building, made up of many building units of many kinds. In order to build tissue out of the protein of the food, the building units must all be separated (in the digestive tract). Some proteins have a large amount of one kind of material and none of another kind which is perhaps

[20] E. V. McCollum and Marguerite Davis: *Jour. Biol. Chem.*, 20 (1915), no. 3, pp. 415–428, figs. 12.

[21] T. B. Osborne and L. B. Mendel: *Jour. Biol. Chem.*, 22 (1915), no. 2, pp. 241–258. [Published since the above was written.]

[22] H. V. Mitchell, unpublished.

essential for the building of tissue. If the body has the power to synthesize the lacking unit, all is well; if it has not that power, then unless some other food supplies it, growth, or perhaps even maintenance, is impossible. A whole volume of important problems are suggested by merely stating the condition of things, and there are three chief ways of attempting their solution. One may feed mixtures of building units, amino acids with fat and carbohydrate and mineral matter and by supplying or omitting one or another, study its importance in nutrition; one may feed mixtures of pure starch, fat and salts, with a single protein added at a time, and study the effect of the particular combination of building units represented by that protein; or one may feed naturally occurring foods, one at a time, for example, a ration made up entirely of corn products or of wheat products. Each of these methods has its distinct and very great value.

Osborne and Mendel,[23] feeding single proteins to which amino acids were added singly and in groups, have shown the importance of several of these building units. Zein, a corn protein, is insufficient to maintain life; with the amino acid tryptophan added it allows maintenance but no growth, with lysin added it allows growth also. Maize glutelin, another corn protein, sustains normal growth. Hart and McCollum[24] find that the mixture of proteins in corn as they exist in the grain are entirely adequate for growth. The total mixture of amino acids in the corn gives the tissues all the kinds of building units they need *as far as protein units* are concerned. Wheat contains one protein, gliadin, which is adequate for growth; it lacks the essential amino acid lysin; when this is added to gliadin food, growth takes place, but whether for lack of lysin or of some other essential building unit, the whole mixture of proteins in the wheat grain is not quite adequate to sustain growth.[24] The addition of single amino acids has not been tried, but 10 per cent or less (of total ration) of casein made the total amino acid mixture satisfactory. If an essential amino acid is present even in small amount in a food, one could get enough of it by eating enough of the food. Of course, that would mean eating an excess of some of the other building units which the body would have to get rid of or burn as fuel. The value of individual amino acids can be shown in an analogous way. Edestin fed as 18 per cent of the ration allows rapid growth; fed as 9 per cent

[23] T. B. Osborne and L. B. Mendel: *Jour. Biol. Chem.*, 18 (1914), no. 1, pp. 1–16.
[24] E. B. Hart and E. V. McCollum: *Jour. Biol. Chem.*, 19 (1914), no. 3, pp. 373–397.

of the ration growth is much slower; but the addition of lysin accelerates the rate of gain decidedly.[25] Another important amino acid is the sulfur-containing cystin, whose effect on growth has also been shown by Osborne and Mendel,[26] by adding it to a casein ration. Nine per cent casein allows little growth in rats but with cystin added compensatory overgrowth occurs in animals stunted by the diet mentioned. Cystin may also be responsible for the effect of feeding blood albumin[27] (which has a high cystin content) to pregnant swine. The offspring were larger and stronger than the controls, whose diet did not contain blood albumin, and their hair was thicker and darker. If cystin could only be served in a more attractive form, some human beings would be glad to take advantage of Dr. Evvard's discovery.

McCollum[28] has suggested an ingenious method of comparing different proteins as to their nutritive value. If a protein is fed which contains all the amino acids the body needs and contains them in the right proportions, the whole protein will be retained, assuming that it is completely digested and absorbed. If there is too little of an essential amino-acid, say one-fourth the amount necessary for the construction of new tissues, only one-fourth of the entire amino acid mixture can be used. This at once suggests the economical advantage of knowing what is lacking from an inadequate food that one may supply it and so utilize the maximum amount of the ration, especially the expensive protein part of the ration. Two inadequate foods may supply each other's deficiencies and make both useful. It is possible to determine with probable accuracy the amount of protein required for maintenance; the difference between this value and the total amount of protein retained gives the amount used for growth. Now, if 75 per cent of one protein is retained for growth and only 25 per cent of another, the former is a much more economical building material to feed to a body long stunted and in need of rapid and easy tissue construction. The comparative nutritive value of proteins is not a very large foundation stone as yet, but it is going to be a very valuable one. McCollum concludes from

[25] T. B. Osborne, L. B. Mendel, Et Al.: *Jour. Biol. Chem.*, 20 (1915), no. 3, pp. 351–378, figs. 10.

[26] T. B. Osborne ,L. B. Mendel, Et Al.: *Jour. Biol. Chem.*, 20 (1915), no. 3, pp. 351–378, figs. 10.

[27] J. M. Evvard, A. W. Dox, and S. C. Guernsey: *Amer. Jour. Physiol.*, 34 (1914), no. 3, pp. 312–325, figs. 5.

[28] E. V. McCollum: *Jour. Biol. Chem.*, 19 (1914), no. 3, pp. 323–335.

his studies that "the protein mixture occurring in the wheat, oat or corn kernel is chemically inferior to casein alone or to the protein mixture afforded in milk; that the protein mixture in each of these grains is, singly, adequate chemically for the complete formation of the specific proteins of the pig's body, although quantitatively, the possibility for this conversion is relatively low." Twenty-three to 24 per cent of the protein of the grains was retained for growth, 45 to 51 per cent of casein and 63.27 per cent of milk proteins—the mixture in milk.

If we look at protein assimilation from the view points established by recent investigations, we can understand how equally well informed scientists have differed so radically as to the requisite proportion of protein in the diet. It depends upon the protein. With the varied diet common in this country, the possible range of per cent of protein may be wide. Indeed that has been proved in animal experiments. Rations containing from 12 to 34 per cent of protein have been successful in sustaining growth, while maintenance rations may range from a minimum of 3 per cent. If one is looking for a finished block, studies of mineral metabolism are even less satisfactory than those of the proteins, but remarkable progress has been made this year. Evvard in the research already quoted[27] found that the feeding of the calcium compounds to pregnant swine increased the size and the relative weight of the bones of the offspring. Hart and McCollum[28] found that the inadequacy of corn to serve as an exclusive ration was due not to its proteins but to its mineral content. When salts were added to make the total mineral content of corn like that of milk, growth was perfectly satisfactory. A similar mineral modification of wheat was not sufficient—casein must be added also and even then the ration was incomplete; but wheat could furnish 80–90 per cent of the ration. From such studies as these McCollum[29] has come to the conclusion, supported by convincing evidence, that an alkaline balance is not necessary to health or growth or well being. On the other hand, Blatherwick[30] finds that "foods which have a preponderance of basic elements lead to the formation of a less acid urine" and the converse is also true. "All urines with an acid reaction are supersaturated with uric acid, while alkaline urines are capable of dissolving uric acid." Acidity is decidedly decreased by potatoes, oranges, raisins, apples, bananas and cantaloups and increased

[29] E. V. McCollum and Marguerite Davis: *Jour. Biol. Chem.*, 21 (1915), no. 6, pp. 619, 620.

[30] N. R. Blatherwick: *Arch. Int. Med.*, 14 (1914), no. 3, pp. 409–450.

by rice and whole wheat bread. "Prunes, plums, and cranberries, although yielding a basic ash nevertheless increase the acid formation" because of the presence in them of benzoic acid which is excreted as hippuric acid instead of being burned in the body to a carbonate as is the case with the acids in oranges, lemons, etc.

The study of fats in nutrition has come to be entangled with the study of the elusory accessory substances, lipins; lard, olive oil, almond oil, cottonseed oil have proved unable to sustain normal growth when added to a fat-free but otherwise adequate diet. Butter fat, cod liver oil, the oil from corn and wheat embryos, from egg yolk, from the kidney, or from beef fat are adequate.[31,32]

SUMMARY

To summarize, the biochemical and medical literature of the past year is rich in material of great value to dietetics. There are accurate determinations of basal metabolism in men and in babies, of the effect of diabetes mellitus, typhoid fever and long continued effect of exercise upon the plane of metabolism and a really convincing explanation of the specific dynamic action of food stuffs.

There have been valuable investigations of all of the classes of foodstuffs from the standpoint of nutrition in growth. Proteins have been studied in groups as they occur in natural foods and in isolated form; additions have been made to our knowledge of the nutritive significance of individual amino acids and in this way light has been thrown on the reasons for differences in the value of different proteins in growth.

The importance of the character of the mineral intake has received emphasis from several points of view: the influence of the mother's food on the offspring; the effect of a basic balance in the ash of the food upon the solubility of uric acid in body fluids and the ability of the urine to hold uric acid in solution, the significance of the mineral content of some cereals upon the value of these grains as exclusive rations.

Fats have been shown to vary decidedly in nutritive value, due probably not to the fats themselves, but to admixtures in them of traces of essential accessory food substances.

[31] T. B. Osborne and L. B. Mendel: *Jour. Biol. Chem.*, 20 (1915), no. 3, pp. 379–389, figs. 6.

[32] E. V. McCollum and Marguerite Davis: *Jour. Biol. Chem.*, 21 (1915), no. 1, pp. 179–182, pls. 9.

THE WINTHROP FARM SCHOOL

HETTY S. BROWN

Principal, Winthrop Farm School, Rock Hill, S. C.

The idea of an experimental rural school to work out some of the problems that confront the rural schools of our country seems to have originated in the minds of three men just at the same time. These three men are, our president, Dr. D. B. Johnson, Dr. A. P. Bourland, at that time secretary of the Peabody Board, and Prof. W. K. Tate, who was then supervisor of the rural schools of our state. It was agreed that the ideal location for the school was Winthrop College, for the president, Dr. Johnson, has always identified himself with every movement for the uplift of our rural population.

The school began work in the spring of 1911. Except for the first four months, the College has supplied all the funds for maintaining the school.

Dr. Bourland voiced the aim of the school in one of his letters, written just at this time relative to the founding of the school. He says:

> Is it not our duty to see clearly, first, what the farmer must do all his life; and what the farm-wife must do all her life; and second, regardless of books, to make a school that will train the farmer and his wife to do their work in the home, on the farm, and in the social life of which they are units? . . . . Our course will consist of a series of activities and experiences in organic succession growing out of the everyday life of the child. . . . . Our problem is to guide the free natural activity of the child, at the same time teaching him and developing him.

Our plant consists of an old farm house, playgrounds, a garden and a field on one corner of the campus. The open country stretches away in the distance, and there is a wonderfully attractive country look and feeling about the place.

Each day a covered wagon is sent out and the children are brought in from the country district that is seen stretching away from the school. Twenty-five children are in the school, and an idea of what they are doing is given in the succeeding paragraphs.

In September and October the fall garden was made. The vegetables planted were parsley, carrots, turnips, spinach, radishes (winter and spring), parsnips, lettuce, and onions. Strawberry

plants, cabbage and collards were also planted. Sweet pea and poppy seeds were sown, and jonquil, narcissus and hyacinth bulbs were put out. All of these are only waiting for the first warm spring days to set them growing.

Last year we realized ten dollars from the sale of lettuce from the cold frame. Estelle, the treasurer, kept our bank account straight for us.

There was such a demand for onions that we decided to make an experiment of raising them for the market. A strict account of the money expended in the raising of the onions is being kept, and just as strict an account will be kept when they are sold.

The lettuce, onions, and borders are worked in common and the money made is used for the school. We used fifteen dollars of the money earned last year for books to add to the school library. In addition to this we bought our own drawing materials and a few other things needed in the school.

We are proud of the sale of our vegetables, but the enjoyment we get from watching them grow, and then preparing and serving them for lunch far outweighs the commercial value. It is in the kitchen and at the lunch table that some of our most valuable lessons are learned. The children are happy, too, when there are more vegetables than we need and they can take some home with them. Sometimes there is a new vegetable, and after learning how to prepare it at school, the children are anxious to take some home for Mother to try. Then Mother must have some of the seeds of the new plant.

In this way the school can coöperate with the home. Each year an attempt is made to plant a vegetable unknown in the community, and thus to introduce the variety that is so much needed in the home garden. One year we tried beans, that were to be used as dried beans in the winter. Another year we tried German radishes; Dr. Bourland sent to Leipsic for the seed. Another year we tried Swiss chard and last year we tried dasheens.

When the seeds are ripe they are gathered and put away for the next year. Each child makes two seed envelopes, one is kept for his own garden next year, and one is taken home for use there. The seeds saved last year were radish, poppy, sweet pea, hollyhock, zinnia, cosmos, and four o'clock. In addition to saving the seeds we rooted some rose and geranium cuttings for the home. We

also got some plants of standing honeysuckle and althea by layering.

The home coöperates with the school, too, for the home gardens furnish us many things. Last spring beet, pepper, and cauliflower plants were brought and quite a collection of flower seeds saved the summer before. The collards, now in our garden, were brought by John last fall, and Crawford has already brought a pod of pepper for our pepper seed this spring. The forsythia plants, growing by the garden fence were brought and put there by Annie May.

Soon the pupils will be busily planning the spring gardens. This consists in making accurate measuring lines, markers, etc., so that the garden making may be done in a business like manner. In the winter boxes are made and seeds of the tender plants sown indoors so that they will be ready to set out as soon as the danger of frost is over. These plants are tomatoes, cabbage, and pepper, together with a number of varieties of hardy flowers. A plan of the garden has been made on which the plants now growing are marked and places for the new seed to be sown and plants to be set are indicated. Various seed catalogs were studied for the best varieties, the seeds are ordered and will be on hand before planting time. With a planting table as our guide as well as our past experience in making a garden, we plant each vegetable as the proper season comes around. Fortunately in our climate we can have fresh vegetables from the garden the year round.

Some lessons in agriculture are based on the soil. The content of the soil is studied and experiments made to determine the amount of moisture and humus in the soil. The soil makers are also studied and observations made of how each agent works. These are followed by experiments to learn the behavior of water in the soil.

In the late winter and early spring the children study buds and are ready to discover the underground bud of the white potato when its planting time comes. A chart is kept on which a record is made of each spring flower as it blooms.

The cooking consists in preparing the midday lunch, in which all participate, and more formal lessons in cookery for the larger girls only.

One hot dish is prepared for lunch each day. Whenever possible, this is something from our garden. Vegetables, such as carrots, turnips, radishes, onions, and potatoes, are delicious served with white

sauce. The soups are easily made and a greater part of the materials comes from our gardens. Lettuce, served with a cooked dressing, is quite a favorite dish. Beets are boiled and served with butter and sugar. Spinach and other greens are boiled with a bit of salt pork and served for lunch occasionally. Potatoes, both white and sweet, can be baked by the youngest children. In winter we enjoy the pumpkins that we raise in our field in summer. Pop corn and peanuts, also, give variety to our lunch.

The coöperation between school and home goes on in the cooking just as it does in the gardening. Annie May brought a citron melon with the recipe for making it into preserves. We used the recipe with the addition of lemon and cinnamon. Annie May's mother said she liked the amended recipe. The children are encouraged to report the part they take in the housekeeping at home. There is usually some one to tell each day of some cooking done.

In sewing we make those things for which a real need is felt. Towels are hemmed, sewing and cooking aprons are planned and made, and we have even attempted a cap and a dress for the baby.

Our carpentering consists of making with the simplest tools the things needed in gardening, such as stakes, markers, etc.; and cabinets for holding materials, bookshelves, etc., for use in the school room.

An attempt is made to connect the activities with the more formal studies. The amount of number work to be got from laying out the garden, measuring each row, computing the amount of seed and fertilizer used, the drawing of a plan to a scale, etc., is evident. In addition to this, there are problems in connection with the harvesting and the sale of the vegetables, and the use to which the money realized from the sale is put. All know the opportunity for valuable lessons in measuring and getting fractional parts of measures that is offered in cooking.

A garden book is kept in which a record is made of the variety of seed planted, quantity, time, amount of fertilizer, cultivation stages of growth of plants, harvesting, etc. The lessons in spelling and English in connection with this work are invaluable.

A study is made of the history of each plant and the work in geography and history receive an added interest.

The making of a record furnishes a proper motive for drawing and writing.

In all of our work the activity comes first and gives a motive for drill in arithmetic, spelling, geography, history, language, etc. Books are used, but only as our tools. Reading serves three purposes. It helps interpret to us our own experiences, gives us information, and leads us into the realm of literature.

The atmosphere of the school is that of a country home. The teacher is a mother surrounded by her children. The children are free to move about and are encouraged to think and act for themselves.

HOMES

FLOSSIE CRANNELL MEANS

O little homes, ye little homes of love!
Strength of a man; a woman's song; laugh of a child;
Warmth of a fire; glow of a lamp; though wild
The wind without, and grim the skies above.

O little homes, set close at every hand!
Ye narrow walled-in worlds of joys and fears,
Built of the commonplace of smiles and tears,
Ye are the heart and sinew of the land!

—*The Youth's Companion.*

BUSINESS TRAINING FOR WOMEN

ETHEL M. JOHNSON

Women's Educational and Industrial Union, Boston, Mass.

PRACTICAL TRAINING IN LUNCH ROOM MANAGEMENT

One of the problems facing students in household economics courses is how to secure the actual contact with business conditions which will equip them to hold managerial positions instead of devoting the first year after graduation to virtually apprentice training while they are learning to apply their theoretical knowledge.

An illustration of what may be done in the way of combining actual experience with class room work is the arrangement made by the Women's Educational and Industrial Union for students in the Institutional Management course and Household Economics School of Simmons College. The Union, as its name implies, comprises departments engaged in educational work with others of distinctly industrial character. The Lunch Rooms, Food Shop, The Handwork Shop, and Hat and Gown Shop are business organizations conducted and managed according to the best business standards. These departments in addition to contributing to the support of the social and educational activities of the Union are utilized as business training laboratories. To do this successfully they must present the conditions of the commercial world. It is just because they are conducted on a purely business basis that they are of value as practice shops. The Union offers, to properly qualified students who are interested in the business side of domestic science, opportunity for gaining practical experience in lunch room and food shop management while they are pursuing their college work.

The lunch rooms at the Union and New England Kitchen (a branch of the Union plant) conduct a business amounting to more than $250,000 yearly, and employ a force of over one hundred paid workers. The School Lunch Department prepares and sends out daily luncheons for more than 5000 high school pupils in seventeen different centers. The Food Shop carries on a business amounting to over $100,000 yearly and has a force of thirty-two workers. Connected with the Food Shop is a catering department, a food laboratory, and a candy kitchen, each offering excellent opportunities for practical experience. The students who go into any of these departments for practice learn

the meaning of a working day, gain an understanding of the demands made upon workers, and confidence in handling large problems and in meeting unexpected situations, and grasp the importance of organization and system. The work for the students is definitely outlined. They are required to conform to business standards, and are rated on their attitude and ability to measure up to commercial demands. For the students in Institutional Management the work is divided into three periods. The students following this program, which is part of a special one year course at the College, are women of maturity who are preparing for business positions.

During the first period, which represents one day a week for six consecutive weeks during the first semester, the students become acquainted with the different departments at the Union, and study the organization from the managerial side. The second period covering eight consecutive weeks, one day a week, is spent in active participation in the work of the kitchen. Here the students learn the details of the work and the importance of system. The third practice period is offered to those students who wish to specialize in lunch room management. These students spend a month working full time in the department selected. This means in general, six days a week and a seven or eight hour day. The number of hours per day varies with the particular problem on which the student is working at a given time. They come on duty at 7 a.m., for instance, when they are with the kitchen superintendent; and at 8.30 a.m. when they are in the Food Shop. In each department they are present during the busiest part of the day and so become accustomed to meeting emergencies. One week of managerial work is arranged for each student during which time she is responsible for a certain part of the regular work. Whatever it is, she sees to it that all of the details are satisfactorily carried out, as if she were actually superintendent.

Another course in lunch room management is offered to seniors in the school of Household Economics. Opportunity for practice is afforded by the college lunch room and the Union's school lunch plant. The course is elective and counts as credit for part of the regular program. It is intended for those planning to go into lunch room business and especially for students expecting to teach in high schools. In many high schools the domestic science teacher is responsible for supervising the school lunch room. Even when she is not in charge

she is generally expected to assist with suggestions and advice. Very possibly the pupils in her cookery class will be required to prepare a part or all of the luncheon. In this case she will have to direct their work. The Union's School Lunch Department affords an excellent opportunity for gaining the experience needed in this connection. It gives a chance to study simple menus, preparation of food, packing and serving at the schools, and the very important subject of accounting. The course is given in the second semester and represents about forty hours of practice. The students work in groups, one division is at the college lunch room twenty hours while the other group is at the Union. Then the divisions exchange places. By this arrangement variety in experience is afforded.

The opportunity which the Union offers means much more than the chance for practice work. That in itself is valuable, but without direction it involves considerable waste of time and effort. Learning by the absorption process is not an economical method. To make the work yield the utmost value to the individual student, to meet the special needs of each, and to correlate the practice with the class room exercises, the Union has established a department of vocational training and practice. The director supervises all of the students that come to the Union shops for training. The practice work is definitely scheduled. The course is planned so as to give each student a series of definite problems through which she will gain an understanding of the necessary organization. A great deal of individual attention is given each student. This is particularly the case with the students in Institutional Management who are taking the intensive one month course for lunch room direction. Each student meets some member of the managerial force, director or assistant director, in the department for a conference on her work and the problems that have arisen. The director of practice meets the students several times a week for individual conference. Each student makes daily a written report in which she gives an account of what she has done and discusses the questions that have come up in the department. This is with a view to recognizing all the points of efficiency and successful organization. The papers are later discussed with the director of practice.

The practical value of this training is indicated by the type of positions taken by women completing the course. Women who with-

out this correlated college and business training would commence work as assistants are enabled to assume managerial responsibility at the start.

The business side of domestic science offers exceptional opportunities for properly qualified women. Salaries are higher as a whole than in corresponding teaching positions. And there is no dearth of openings. To women who do not care to teach and who possess executive ability it is a particularly attractive field.

PRACTICAL TRAINING IN SALESMANSHIP

Suggestive of the increasing interest among college women in business opportunities is the introduction this year of a summer course in salesmanship and department store work at Simmons College. The course which covered six weeks, from July 6 to August 14, is informational in character and intended primarily to serve as a general background for the one year normal course for teachers of salesmanship given by the Women's Educational and Industrial Union in coöperation with the College. The summer course in no way attempts to train teachers of salesmanship, its aim being to acquaint students with the subject matter of department store work. It may, however, count as credit for part of the regular course in salesmanship. This is particularly the case with women of maturity and successful teaching experience. And it is to the women of this type that the course will be of especial value in enabling them to complete the regular program before the end of the college year. This is important, because the demand for trained women in the field of salesmanship is so pressing that many of the students are called to accept positions before they have finished the year's work. A large number of the requests from stores and business firms come in mid-winter and it is largely to meet this situation that the summer course has been established.

The work comprises the study of such subjects as store organization, store system, store principles, progress of merchandise, and selling methods. A number of special lectures were given this summer by experts in store and educational work. The list included the following topics:

The history of training for department store work, Mrs. Lucinda Wyman Prince, Director of Salesmanship in High and Continuation Schools, Boston; The relation of the customer to the department

store, Mr. Walter A. Hawkins, Superintendent, Jordan, Marsh Company; Business ideals, Mr. C. Lothrop Higgins, Millinery, Boston; The human side of department store business, Thomas K. Corey, Store Manager, William Filene Sons' Company; Department store business in terms of figures, Charles C. Ferris, President, Gilchrist Company; and Coöperation of store and school to meet the educational needs of young workers, Dr. Franklin B. Dyer, Superintendent of Schools, Boston.

In addition to the class room exercises there was considerable laboratory work, consisting of observation, investigation, and actual store practice. Several of the large department stores in Boston were used as laboratories, and arrangements were made by which students taking this course were allowed to do a limited amount of selling in these stores during the summer session. Other forms of practice are service shopping, reports of sales observed, analyses of window displays, and comparisons of store service features.

The field of salesmanship is an excellent one for the college trained woman. Salesmanship teaching and educational store work represent new occupations for women, and occupations in which the demand for the competent by far exceeds the supply. It is a type of work that appeals to women who prefer a special form of teaching, to those keenly interested in social service and welfare work, and to women with sound business ability. Salaries and chance for advancement are good. And the opportunity for initiative and personal development are exceptional.

The Union's training course for teachers of salesmanship has won wide recognition, and the demand for educational directors is so urgent that it is difficult to meet the calls which come from all parts of the country.

That college women are attracted by the work is shown by the fact that fifteen colleges and universities as well as seven normal schools are represented by the fifty-five graduates of the course. Positions held by these women include teacher of salesmanship in high and continuation schools, educational director in department store, service manager in factory, and director of vocational guidance work. The salaries range from $1000 to $2000 a year. The course which was definitely organized by the Union in 1912, since 1913 has been conducted in coöperation with Simmons College and leads to a certificate from the College.

THE COMMUNITY ORGANIZED FOR NEIGHBORHOOD PATRIOTISM[1]

A scheme for the organization of rural communities for both business and social purposes is worked out in an article which has been printed as a pamphlet for the use of the Department of Agriculture, Office of Markets and Rural Organization.

The scheme calls for ten committees, five of which are to deal with business needs, and five with social needs. Every member of the organization is to serve on some one of these committees, and in addition, there is to be a central committee which directs the general policy of the organization, raises funds and controls expenditures.

The committees that are to deal with the business interests of the community are as follows: Committee on Farm Production, Committee on Marketing, Committee on Securing Farm Supplies, Committee on Farm Finance and Accounting, Committee on Communication and Transportation.

Similarly, the five committees that attend to the community's social interests will deal with: Education, Sanitation, Recreation, Beautification, Household Economics. The work of most of these committees is indicated by their titles; for example, the committee on production can encourage the formation of corn, poultry, pig, canning and gardening clubs.

In the same way, the committee on marketing can secure the standardization of the community's products, and search out the best markets, make contracts on a large scale which will be more favorable than any individual can secure for himself, and in many other ways economize in the selling of the community's goods. The Committee on farm supplies can economize in buying.

Just as the five business committees are to grapple with the fundamental problems of producing and selling, the five social committees should direct their efforts to the improvement of living conditions in the country; to securing better facilities for educating the children; better sanitary conditions; and more household conveniences such as hot and cold water, heating and lighting systems, etc.

As an appendix, the pamphlet contains a brief list of suggested readings for the various committees. Many of these are Government publications.

[1] Office of Information, U. S. Dept. of Agriculture.

HOME ECONOMICS DAY AND ITS OBSERVANCE

Home Economic students and teachers are now thinking of the best way to observe Richards Day, December third next. The American Home Economics Association, the Richards Memorial Fund Trustees, and all others interested in the progress of Home Economics hope, first of all, that the observance will be very general. They also hope that the Memorial Fund may be increased as a result of the loan exhibitions, teas, candy sales, plays, pageants, or whatever else may form an appropriate part of the day's observance. The Fund is growing, and, though the income is not very large, it will be expended in ways which will immediately help the cause which owes so much to Mrs. Richards. Is not this immediate usefulness one more reason why we should all work for the Fund?

There is one kind of observance which is always appropriate for Home Economics Day, and that is a meeting of students and faculty only, or open to the public, with a program including a sketch of Mrs. Richards' life and activities, selections from her writings, and, in general, an appreciation of her work for the home. Or, the meeting may take a more general form, if this seems preferable. If this is the case, it may, in the opinion of those who have given the matter thought, most appropriately take on a retrospective or historical character, in order that each new generation of Home Economics students may keep in touch with that which has gone before. The JOURNAL OF HOME ECONOMICS contains, in its advertising pages, a list of the Association's publications and reprints, which will prove invaluable as sources of definite information regarding Mrs. Richards and her work. Scattered through the volumes of the JOURNAL will be found articles bearing upon the history and development of Home Economics and references to other sources of information which may be consulted in preparing an historical program.

For those who wish something of a different nature, several suggestions are made. "An 1876 Tea" would prove attractive, at which costumes of the period are worn and "refreshments" served which are in keeping—for which see "The Ladies' Column" in the fashion magazines and other periodicals of the time. This would be appropriate because the present interest in interior decoration, art needlework, and other similar matters pertaining to household art had its modern revival at the Centennial Exposition.

A series of tableaux—"Preparing the Dinner in Other Times"—is worth trying, if one prefers this form of entertainment. It would certainly be entertaining to have a glimpse of how it was done, "In A Colonial Kitchen;" or "In Camp with the Soldiers during the Revolutionary War," (with the camp fire, pots, and kettles, and camp table); or by the "Pioneers on the Trail," when "prairie schooners" were crossing the great American desert; and in "A Corner of the Rumford Kitchen at the Chicago Exposition in 1893," where Mrs. Richards demonstrated to a wide public the fact that Home Economics is an important aid to social service, since it can supply clean, wholesome, and satisfactory food at reasonable prices and under good surroundings.

If this seems too elaborate, perhaps a series of pictures—"A Dream of Fair Women—and Their Work in the Home" might be satisfactory. These living pictures could include "Mother" (mending, or reading to a child); "Grandmother" (spinning or knitting); "Mother's Helpers" (a group of children sewing or paring apples); "The Dairy Maid" (with her pails of milk or working butter); "The Cook" (with her sleeves rolled up making pudding); "The Laundry Maid" (starching a frilled cap); "The Haymaker's Helper" (with rake and sickle); "The Nurse" (with her bundle of herbs making camomile tea for an invalid in a chair who looks more interested than ill); and so on—with costumes of 1830 or some earlier date, in order that the effect may be more picturesque than would be the case with modern costumes.

A loan exhibition of "Fancy Work of Yesterday" would also be very satisfactory, for all of us would be glad to see brought together the samplers, wax flowers, picture frames made of "leather work" or of "imitation coral," embroidered collars and undersleeves, the perforated "card board" mottoes, spatter work, splint work, "air castles," hanging baskets, bead work, "charm strings" of buttons, tatting, transparent painting, and so on—not to mention hair wreathes and hair jewelry—indeed, all those things our mothers, grandmothers, and their friends passed so many pleasant hours in making, and which, after all, are as well worth while as much of the fancy work of today.

Those who wish to give plays should not forget "Prince Caloric and Princess Pieta." Copies of this attractive little play can be secured through the JOURNAL.

The feeling has been frequently expressed that a play or pageant should be written commemorating the many important things which the New World gave to the Old. We have only to think of Indian corn, potatoes, tomatoes, chocolate, and so on, to realize that the list of those which pertain to the subject-matter of Home Economics is long as well as important. Those who have made the suggestion and others may be glad to know that such a pageant has been written. It is called "America's Gifts to the Old World" and it is hoped that it will be published, and be obtainable, through the JOURNAL before November first. The pageant calls for quite a number of characters and for a presentation which may be elaborate or simple as circumstances determine. It has been prepared for the express purpose of aiding the Richards Memorial Fund, and it is expected that whenever it is given some arrangement will be made by which the Fund will profit. It is suggested that any who might wish to present the pageant for this coming Home Economics Day celebration correspond with the Editor of the JOURNAL before making definite plans, as the time is short. Though appropriate for Home Economics Day, the pageant would prove equally good for Home Economics students who wished to use it at some other time. Indeed, it would be very useful for Commencement Week, since it can be given out-of-doors. Moreover, it is believed that interest in the pageant will not be confined to Home Economics workers, for in subject-matter and treatment it should interest any group of persons wishing to stimulate patriotic interest and to encourage pride in this New World which to us is Home.

EDITORIALS

THE BEST DEFINITION OF HOME

In response to a suggestion of Miss Helen Louise Johnson, the National Chairman of the Home Economics Department of the General Federation of Women's Clubs, the *Pictorial Review* last February offered $500 in prizes for the seven best definitions of the word "Home" sent in by any federated club.

Thousands of manuscripts were submitted, hundreds of them good, half a hundred worthy of a prize.

Miss Zona Gale, in her explanation for the Committee of Award of the basis on which the decision was made, expressed her own lofty ideal of the meaning of the word.

She says:

In trying to judge the manuscripts submitted, I am struck by certain facts in the conception of home:

I. That it is a triumph that ideals of individual and family living have come to be as high as those expressed in virtually all the essays, but that ideals of the socialized home are farther to seek. For most of these conceptions are of the best-developed homes of the past and present, and there seems to me to be not enough shadowing of what home should be—tomorrow.

In the essays are presented, first, the earliest ideas of home as a place for protection and defense; second, the later idea of home, historically, as a place for shelter and feeding; and third, the more recent ideal of home as a place for spiritual strengthening, love and child-training.

Also, many of the essays seem to be from the age-long viewpoint of the man, namely: home is a place for rest.

II. That nearly all the essayists seem to have predicated four walls, a roof and a floor as necessities to home.

If I go down-town and some one asks me where my home is, my reply is a street and a number. If I am in another town, my reply is: "Portage is my home." If I am in another state, my reply is "Wisconsin is my home." If I am in Europe, my reply is: "America is my home."

All these, then, are home. But only the first of these is, in most cases, treated in these definitions.

I am giving my judgment to those essays in which the connotation of home is widest and which seem to me to approximate most nearly to an ideal for the life of the race.

This is because it seems to me that just in proportion as we recognize by name all our homes, and our relationships to them, and thus define home, so—as a result quite as much as a cause—will the smallest home of them all, the walled home, grow toward its ideal and towards its next step in development.

And when once we can feel for a continent—and all its spiritual content—the glow and the thrill which we feel now for our own street address—and all its spiritual content—what a home the home planet will be.

The first prize, of $250, was awarded to the Bathgate Study Club of Bathgate, North Dakota. This manuscript was submitted for the club by Miss Janet Davies.

Home is the index of civilization. Some words there are in our English speech so big with meaning, so rich in suggestion, so golden with poetry that they will not be defined. Home to each of us is too full of meaning to be limited by any statement of mere attributes. It rings with magic echoes and to our inner sense means rest, content, sympathy, love and service. Through all our years the content of the word has grown richer, through all the ages the thing itself has grown more sacred.

Long ago in the history of the race, before the institution of the family, there must have existed some temporary shelter, some familiar spot, that was rest to the primitive woman, some protective nest woven by mother ingenuity for the primitive child. For home has always in its truest and best sense meant a place for the nurture and the care of the young, and the idea of home always centers about the relation of parent and child.

As civilization grew, the home, its concomitant, its instrument, its ally, and its truest index grew, too. With the growth of a complex and cultured life came the need for a longer period of preparation, a protracted infancy, a period of plasticity. The child must be protected and directed so that he might be formed to the truest and highest and most diverse manhood.

So homes grew up, founded on the institutions of marriage and the family and with their prime function, the rearing and education of the child. But this is not their only service. The adult needs a home to be his lodestar in the perplexities, his haven in the buffetings of modern life. Then, too, in our lopsided and imperfect lives, it too often comes about that there are empty homes where no children have come, desolate homes where the children are gone, makeshift homes founded on curious or accidental relationships—and these, too, may be real homes.

For a true home is something other than a mere dwelling-place, some-

thing further even than the habitat of a family group. Home is a beautiful atmosphere of cheer and rest and content and mutual service. To it the individual brings the best that is in him, and from it in return he receives the most unselfish joy. Here he may expand and relax, here he is most wholly himself, here he comes again to be in tune with himself and in tune with God.

For home reacts on its creators. Into its making, a man or woman, commonplace enough to outward seeming, may put an energy almost superhuman, a devotion almost sublime; this toil and sacrifice sweeten home and hallow it, and bring forth the good fruits of sound living. The children of a real home, hut or castle though it be, go out dowered as richly and wisely as the brooding parent love can dower them. They have inherited, as far as a new life may, the very lives, the strength, the vitality, the dear-bought progress of the parent two. The best energy of a generation has gone into them. They are to be the supermen of the future. They are to carry the family one step onward toward the fruition of its ideals. They are to lift progress and culture one step upward for all of human kind. It is not for nothing that the immigrant woman toils in the sweat-shop that her children may have American clothes, or that the ditch-digger foregoes meat that his son may go to college. Unconsciously through parental love, the welfare and advancement of the race work out.

But it is not alone the poverty-bound who give their very lives to their homes and their families. When material needs are satisfied, the growing spirit needs oversight and sympathy and direction, too. We want to give to our children not only sturdy bodies and well-equipped brains, but right habits of regular living, prompt doing, clean-cut speech, clear thought, intelligent curiosity, and right instincts, that they may be earnest in word and work, quick to the beauty in and of life, reverent toward God and his temple in their human bodies. So does home minister to the soul and the body, to the individual and the family.

The home has ever been the cradle and the chief instrument of progress. Every advance in the standard of material living and in the thought and culture of the race is germinated and reflected there. The progress or decay of a people can be measured by its home life. It is significant of the new brotherhood, the new sensitiveness to civic responsibility, that we can no longer be true to the family in the best sense without taking thought for our neighbor's safety—that we cannot live for ourselves alone.

We have widened our sympathy and our interests and we are heeding the needs of our community. Civilization has come at last to the era of fraternity, of coöperation, of communal sympathies. Home, always the index of civilization, is filled with a new bigness, a new pulsing neighborhood life. Home is growing out to that larger life that will some day make brothers of all the world.

HOUSEKEEPERS' DEPARTMENT

ELECTRIC VACUUM CLEANERS

M. E. COOLEY
Student at Teachers' College

In vacuum cleaning machines, a partial vacuum is produced in the machine and in the pipe line and tool. The face of the tool is held squarely on the surface to be cleaned. The pressure of the air outside the machine is greater than that inside, and a suction is produced depending upon the amount of difference in pressure. Air is thus forced into the machine carrying with it dirt and dust from the object cleaned. This dust-laden air is then passed through a bag where it is freed from its dirt, and passes on through the air pump and out into the room again, or into outdoor air.

The important parts of a machine are: vacuum producer, motor, dust-bag, and renovators or tools.

The vacuum producers are of two principal types—piston type and fan type.

The piston type is good for cleaning small rugs—will take up larger material (matches, paper) than the fan type. The Root type (rotary piston) is the most efficient where carpet cleaning is the principal function, and a hose $1\frac{1}{4}$ inches in diameter is used, but with smaller hose (1 inch in diameter) the piston pump is better.

Where carpet cleaning is of secondary importance the fan type is efficient, and the initial cost is less. Of the fan type the "single stage centrifugal fan," is little better than a good carpet sweeper. The "multi-stage centrifugal fan" is efficient for bare floors, but not so good for carpets and upholstery. A "multi-stage centrifugal fan" consists of several electric fans rotating horizontally on a vertical shaft. They are similar in action to the rotary lawn sprinklers—air enters at center of the fans, and is forced out at outer edge of fans and thence to the outlet pipe.

The motor causes the piston to pump out the air—or the fans to rotate. Vertically mounted motors give longer service, and have less

friction than those horizontally mounted. The brushes should be easily removable.

The dust-bag should be on the suction side of the vacuum producer; that insures the passage of the dust-laden air through the bag before it enters the pump chamber.

The tools, furnished with lower priced cleaners, generally include a full set for floors and floor-coverings; extra lots may be bought at prices varying with type of tool desired, prices ranging from $0.30 to $4.

The form of a tool for any particular service is important. A carpet renovator should have a slot not more than 12 inches long and $\frac{3}{8}$ inch wide, and the face in contact with carpet not more than $\frac{3}{8}$ inch on each side of the slot, and slightly rounded at the outer edge. This form is less likely to tear the pile off the carpet. To avoid tearing upholstery and clothing, the slot should be divided into a number of small slots inclined to the edges of the face. For bare floors the face of the renovator should be curved, not flat, and should be of felt. The tool for ceilings, and other flat surfaces is a bristle brush; but this is not sufficient with the portable type of machines. Tools for cleaning corners are efficient only with the installed systems. To clean carving and relief work, round-bristle brushes with extra long bristles and cotton skirting have been found to be the most efficient. To clean radiators and library shelves, the best form is a piece of tubing flattened at its outer end.

Installed plants are much more efficient than the portable machines. They range in price from $300 down and it costs from one to two cents per hour to run them, depending on the cost of the current in any locality. There are semi-installed machines ("portable stationary" cleaners) that are as efficient as the installed systems. These are especially good for people who live in a rented house, as they can be readily removed. They require an inconveniently long pipe, and for that reason are not so easily handled. They range in price from $32.50 up. The portable machines vary greatly in price from $18 to $125. In general the cheap forms seem efficient for a time but are not durable. Cost of running the portable cleaners is the same per hour as for the stationary plants in the same locality.

The housekeeper should consider these points when buying a machine:

Motor.—Vertically mounted, see that the "brushes" are in good condition and easily removable.

Lubricator.—Should be able to operate a hundred hours without its requiring relubrication.

Dust-bag.—On suction side of the vacuum producer, should not get clogged easily. To test this—it should be able to pick up at least ½ peck of mixture 40 per cent sand, 15 per cent sweepings, 15 per cent Portland cement (or very dry flour) and to retain this in the bag and still be able to pick up material from a bare floor.[1]

Handles of tools.—Should be rigid and with some sort of swivel joint between the renovator and its stem.

Weight.—If a portable type, it should not weigh more than 75 pounds. This is heavy for a woman to carry.

PERSIMMON RECIPES[2]

MANY WAYS IN WHICH THIS NATIVE FRUIT MAY BE USED

A new publication of the United States Department of Agriculture, Farmers' Bulletin No. 685, calls attention to what it believes is an unwarranted neglect of a food fruit—the native persimmon. In addition to good flavor (when well ripened), the persimmon makes a good showing, pound for pound, with respect to the nutritive material which it supplies.

As the bulletin points out, many persons with fine persimmon trees in their possession are allowing the fruit to go to waste either through ignorance of the many uses to which it may be put or through prejudice. There is a saying in the persimmon country that persimmons are "good for dogs, hogs, and 'possums." This, however, is declared to be a gross injustice to a very valuable product.

One reason for the neglect of this fruit is the mistaken idea that persimmons are unfit to eat until they have been touched by frost. As a matter of fact much of the best fruit is lost each year because it ripens and falls to the ground where, not being touched by frost, it is left to rot. Such persimmons as are not edible before frost comes are a late variety of the fruit and the reason that they pucker the mouth is because they have not yet ripened. In general the best fruit are those than ripen just before the leaves fall.

At the present time the most common use for the fruit in the per-

[1] The bags furnished with most reliable machines are now so standardized as to obviate the necessity for testing.

[2] Office of Information, U. S. Dept. of Agriculture.

simmon belt, which extends from Maryland, Virginia, and the Carolinas westward through Missouri and Arkansas, is as food for hogs. It can, however, be made up into a large number of very palatable products for human consumption. To be on the safe side it is well to add a half teaspoonful of baking soda to each cupful of persimmon pulp whenever the fruit is subjected to heat. This does away with all risk of astringency, the quality in unripe persimmons which produces the well-known puckering of the mouth. If the fruit is perfectly ripe this precaution is not necessary, but as there is always the possibility of some green fruit finding its way into the pulp it is usually advisable.

According to the writer of the bulletin, the following recipes will be found simple and agreeable:

PERSIMMON BREAD

1 cup of persimmon pulp,
1 cup of water,
½ teaspoonful of soda,
Yeast,
Shortening,
Flour to make a stiff dough.

Set to rise, mold, and bake like other bread.

PERSIMMON CRUMPETS

Take 1 pint of the sponge of persimmon bread which has been set over night, add 1 egg and enough milk to make a thin batter, set to rise for one hour, then bake on a hot griddle like griddle-cakes. Serve hot with butter or sirup.

PERSIMMON GRIDDLECAKES

1 cup of persimmon pulp,
1 egg,
1 cup of flour,
1 teaspoonful of baking powder,
½ teaspoonful of soda,
Milk to make a thin batter.

Bake and serve as above.

PERSIMMON CAKE

1 cup of persimmon pulp,
½ cup of sugar,
1 egg,
1 cup of flour,
1 teaspoonful of baking powder,
½ teaspoonful of soda,
Butter of size of a walnut.

Bake 40 minutes in a moderate oven. For a soft pudding leave out the eggs. For a custard leave out the flour and the baking powder.

PRESERVED WHOLE PERSIMMONS

Put a thin layer of sugar in the bottom of a jar; then a layer of whole ripe persimmons, then a layer of sugar; and so on until the jar is full.

The sugar will soon dissolve and form a sirup. Press the upper fruits down under the sirup or add more sirup to the jars. Seal and store until used. The sirup may be drained off and the fruits served like dates, which they will resemble very much in both appearance and flavor.

PERSIMMON ICE CREAM

2 cups of persimmon pulp, 1 cup of thick, sweet cream.

Beat together thoroughly and freeze like ordinary ice cream. The fruit must be thoroughly ripe and nonastringent.

PERSIMMON FUDGE

2 cups of persimmon pulp, 2 cups of sugar.

Cook over a slow fire, stirring occasionally, until graining begins. Add 1 teaspoonful of baking soda and stir over the fire until quite stiff. Spread on buttered platter or paraffin paper.

THE MISCHIEVOUS WIPING CLOTH

The dish towel, even the genteel barred variety, called a tea towel, is in bad repute. Ever since men began to look through the microscope and think in terms of the microscope its fate has been sealed. Only when freshly washed and boiled and used in clean hands to wipe the rims of already scalded and drained dishes is it to be admitted into a modern kitchen. Used in dirty hands till grimy, carried on the arm of a waiter and used to polish a plate or wipe up a table, it belongs to the dark ages, hygienically speaking. In dish washing the household should more and more approach the practice of the laboratory where glass ware and porcelain are washed, rinsed in boiling water and placed to drain. No cloth, no matter how well known its antecedents, is allowed to touch them, for they are now absolutely clean and must remain clean.

In cleaning toilette articles, bath tub and basin it should be remembered that ordinary cleaning cloths belong, like the scrubbing brush, to the early coarser processes. The final cleaning must be by hot water only. Whatever comes in contact with any body aperture must be free from all possibility of bacterial contagion. The common bath tub has doubtless been a carrier of disease germs from one person to another. Before use, however clean it may look, it should be scalded out and not dried with any of the cloths ordinarily given over to the purpose.

PURCHASING MEAT

Every housewife should know how to select meat wisely and understand how to utilize the various cuts of meat to the best advantage. In recent numbers of the *Journal of Agriculture and Horticulture*[1] some information is given regarding the selection of meat, which should prove of value to many housekeepers though part of it is of especial interest to the institutional housekeeper, since she more often can control conditions and select from a wider choice.

The author recommends that the purchaser "buy from the side or quarter always and learn to judge meat in this way, considering the following points:

1. "Patronize a neat, sanitary shop.
2. "Consider the shape of the side.
   "Too large a carcass shows age and coarseness.
   "Heavy brisket shows coarseness and toughness.
   "Heavy front quarter shows poor breed and hence poor quality.
   "Carcass should be symmetrical.
3. "Finish of carcass.
   "Outside should be well covered with fat. Hard fat in lumps indicates staleness.
   "Ribs should be well covered with fat—not too much kidney fat.
4. "Depth through the back. Choose from a side showing thickness through the back. This indicates a generous amount of meat.
5. "Color of meat. See that the lean is well streaked with veins of fat and that flesh is a bright red, not dark red.

"Avoid a side which is sparsely covered with deep, yellow fat, with dark red flesh. This indicates cow beef."

Diagrams of a side of beef or other meat showing the name and location of the different cuts are generally to be found in the best cookbooks. A study of such diagrams which are probably familiar to most housekeepers should prove helpful to the purchaser of meats. Other useful information which is not generally available in connection with such diagrams is collected in a convenient form in the following table which is reproduced from the above mentioned article.

[1] *Journal of Agriculture and Horticulture*, Dept. Agr. Quebec, 18 (1915), nos. 10, pp. 221, 222; 11, pp. 243, 244.

A table of information about cuts of beef

NAME AND LOCATION OF CUT	HOW SOLD	CHARACTER AND QUALITY OF MEAT	PREPARED FOR EATING
Loin. All between first rib and rear end of hip-bone.	In slices: a. one to two inches thick—Delmonico porter-house, and sirloin steaks; b. thicker slices for roasting.	Lean, mostly tender fat on edges; little bone. Sirloin steaks: 1. Hip-bone sirloin next to the porter-house, with large tenderloin, is the best. 2. Flat-bone sirloin second choice. 3. Round-bone sirloin, poorest.	Best quality for roasting and broiling.
Rump. Back of loin.	Sold either whole or in halves. In latter case, aitch-bone is split in two.	Tough with considerable bone.	Corned and boiled. Excellent pot-roast.
Round. 1. Top, inside of thigh.	Sliced, or cut thick. Best part of bottom round sometimes cut with top for dealer's advantage.	Solid piece of juicy, fairly tender lean bordered with fat. Good meat has thick piece of fat between top and bottom round.	Excellent for braising, pot-roast, and beef loaf, also for beef juice and beef tea; fairly good roasted or broiled.
2. Bottom, outside of thigh.	Cut thick.	Similar to top round, but tougher, has streaks of bristle.	Pot - roast, soup, mince-meat.
Top Sirloin. Between sirloin and round.	In steaks or for roasts.	Solid piece similar to top round.	Fairly good steak; excellent pot-roasted.
Prime ribs. First six ribs.	Sold in pieces containing upper parts of two or more ribs may be boned and rolled; with ribs left in is called "standing roast."	Similar in quality to loin, but has more bone and no tenderloin.	Fine roasts.
Blade — 7th, 8th and 9th ribs.	Cut like prime ribs; blade removed.	Similar to prime ribs, but has more gristle and bone.	Braising, beef loaf, stews, Hamburg steak.
Chuck—10th, 11th, 12th and 13th ribs.	In steaks, or boned and rolled.	Spinal processes long, tough.	Braising, pot-roasting, or stew.
Neck.	To suit purchaser.	Juicy and well flavored but tough.	Excellent for stews and soup.
Brisket.	To suit purchaser.	Layer of juicy well flavored meat over fat and bone.	Boiled or corned.

A table of information about cuts of beef—Continued

NAME AND LOCATION OF CUT	HOW SOLD	CHARACTER AND QUALITY OF MEAT	PREPARED FOR EATING
Cross-Rib. Lies across the ribs.	To suit purchaser.	Muscles all run one way; no waste.	Pot-roast or inferior steak.
Plate. On the side below ribs.	To suit purchaser.	Has layers of fat and lean, with thin bones (ends of ribs) at bottom.	Corned and boiled.
Navel. Middle part of belly.	To suit purchaser.	Similar to plate, but has less bone.	Usually corned and boiled.
Flank, below the loin. 1. Thick flank. 2. Flank steak.	1. To suit purchaser. 2. Whole.	Coarse and tough; no bone, fine flavor. (Should not be corned, because it has no fat or bone to protect its juices.)	1. Stewed or boiled 2. Rolled and braised.
Fore Leg or Shin.	Whole or to suit purchaser.	Tough, with bone and tendon.	Soup.

It must be remembered that the cuts of meat vary somewhat in different sections of the country. This table gives the Canadian cuts that differ slightly from those in use in New York, Boston or Chicago. In Boston, e.g., a cut called the "back of the rump" is an excellent roasting piece for a large family, and is preferred by many to any other roast. In many places a flank steak is furnished that, well scored, may be successfully broiled and is juicy, fine flavored and inexpensive.

These differences in cuts are never so great as to lessen the value of this chart.

The study of a side of beef shows that a greater portion of it must be classed as "tough cuts," since the ribs and the loin are the only "tender part."

The tough cuts are cheaper than the tender cuts but this does not mean that the tender cuts are the most nutritious. The two nutrients in meat are protein and fat, and investigation has shown that the protein obtained from a given weight of meat differs very little either with kind of meat or the "cut." The difference between the cuts is chiefly in the amount of fat.

THE BIRD POPULATION[1]

The present bird population is much less than it ought to be, according to the biologists. If birds were given more protection and encouragement there would be an increase in numbers which would be accompanied by a corresponding decrease in the number of insect pests.

While one usually thinks of the English species when the word "sparrow" is mentioned, there are some 40 species of sparrows in North America which are helpful rather than harmful and should be encouraged rather than discouraged.

The complaints against the robin have dwelt on his fondness for cherries, strawberries, blackberries, raspberries, pears, peaches, prunes, grapes and even olives in California. The bluebird's consumption of cultivated fruits seems more limited, being practically confined to cherries, raspberries, and blackberries, and its fruit-eating period is very short, being only from late fall to early spring when the insects which it prefers are scarce.

A news bulletin contains a list of ornamental plants bearing berries which, it is suggested, might be planted in regions where the robin and bluebird are occasionally compelled to feed on cultivated varieties of fruit and berries. In olive regions, for instance, if a robin can find such berries as *Madrona*, *Heteromeles*, and *Cascara* he will prefer them to the cultivated fruit valued by man. Mistletoe and elderberries are among the varieties recommended for the bluebird in particular. Dogwood, pepper berries, china berries, and hackberries are popular with the robin, and, in the North, cedar, smilax, and holly give them both food and shelter. The best time of year for transplanting woody plants is late fall or winter.

The Department's biologist advises farmers by all means to encourage the robin and the bluebird, considering that they will more than compensate for occasional depredations by the assistance rendered in killing undesirable insects and that they can be pretty effectually kept from eating valuable fruits if they are provided with a supply of wild ones for winter diet when insect food is scarce.

[1] Office of Information, U. S. Dept. of Agriculture.

HEAT, HUMIDITY AND WORKING POWER

What constitutes a vitiated atmosphere, and wherein are the depressing effects of "bad" air to be found? Of late, temperature and humidity rather than abnormal quantities of the respired gases, carbon dioxid and oxygen, or the presence of harmful expired organic products of respiration, have been held responsible for the untoward consequences of living under conditions of poor ventilation. Drs. Lee and Scott, of the College of Physicians and Surgeons at Columbia University, have recently reported definite objective signs of physical inefficiency in individuals subjected to an atmosphere of high humidity and high temperature. Measurements were made on the working capacity, that is, the total amount of work which excised muscles of animals are capable of doing before exhaustion sets in. The subjects were kept, to cite a specific illustration, at 21° C. (69.8° F.), with an approximate humidity of 54 per cent, in one case, and at 33° C. (91.4 F.), with a humidity of 89 per cent, in the other. The contrasts here quoted represent the distinctions between comfortable atmospheric conditions and the air of a hot, humid summer day. As an outcome there was a marked diminution in both the amount of work performed and the period of working power under the influence of high temperature and humidity. Under these conditions, furthermore, the body temperature also rose somewhat. The facts thus cited in the opinion of *The Journal of the American Medical Association* confirm by the unbiased testimony of direct experiment what the sensations and psychic responses of man have long since intimated.

BIBLIOGRAPHY OF HOME ECONOMICS

Foods

The Water Content of Oysters. F. L. Shannon, *Proc. Assoc. Amer. Dairy, Food and Drug Officials*, 17 (1913), pp. 161–165.

Cause of Variation in Weight or Measure of Food Products. L. M. Tolman and W. E. Hillyer, *Amer. Food Jour.*, 9 (1914), no. 8, pp. 407–416, figs. 7.

An Apparatus for the Rapid Determination of the Available Carbon Dioxid in Baking Powder. B. Garrison, *Proc. Assoc. Amer. Dairy, Food and Drug Officials*, 17 (1913), pp. 158–160.

Three Creamery Methods for Making Buttermilk Cheese. J. L. Sammis, *Wisconsin Sta. Bul.*, 239 (1914), pp. 3–24, figs. 7.

Ice Cream Investigations. *Wisconsin Sta. Bul.* 240 (1914), pp. 40, 41, fig. 1.

Fruit Juices. F. Thompson and A. C. Whittier, *Delaware Sta. Bul.* 102, pp. 28, figs. 7.

Roselle Recipes. P. J. Wester, *Phillippine Agr. Rev.*, 7 (1914), no. 5, pp. 239–241.

Studies on Fruit Juices. H. C. Gore, *U. S. Dept. Agr., Bul.* 241 (1915), pp. 19.

[Food and Drug Inspection and Analysis.] W. G. Tice, *Ann. Rpt. Bd. Health N. J.*, 37 (1913), pp. 276–372, pls. 4. A report of inspection work and other activities. Among the special investigations reported are the bacteriological examination of water cress grown on the banks of a polluted stream and the bacteriological examination of several cans of frozen eggs held in cold storage. A sanitary survey of the shell fish industries was also made. Rules are given for the preparation of soft clams for market.

[Food and Drug Examination and Other Topics.] E. F. Ladd and Alma K. Johnson, *North Dakota Sta. Spec. Bul.* 3 (1914), no. 8, pp. 105–128. The results of food analyses and the sanitary inspection of food establishments are given. A report of an investigation of commercial fruit jellies by L. A. Congdon is included. Hints which are of interest to housekeepers are also given regarding the varnishing and finishing of woodwork.

Chicken Fat, VI. The Factors Influencing the Acid Value of the Crude Fat. M. E. Pennington, J. S. Hepburn and E. L. Connolly, *Jour. Biol. Chem.*, 17 (1914), p. xliv.

The Development of the Sugar Industry. By C. A. Browne, *Amer. Jour. Pharm.*, 87 (1915), no. 1, pp. 10–29.

Physiological Changes in Sweet Potatoes During Storage. By H. Hasselbring and L. A. Hawkins, *Jour. Agl. Research*, 3 (1915), no. 4, pp. 331–342.

Condition of Casein and Salts in Milk. By L. L. Van Slyke and A. W. Bosworth, *Jour. Biol. Chem.*, 22 (1915), no. 2, pp. 135–152.

Hygiene and Sanitation

Regulation of Food Supplied Hotels, with Special Reference to Sanitary Conditions Involved in its Preparation. G. G. Frary, *Amer. Food Jour.*, 9 (1914), no. 8, pp. 365–367, fig. 1.

The Hygiene of the Preparation, Storage, and Distribution of Food. J. Cates, *Jour. Roy. Sanit. Inst.*, 35 (1914), no. 6, pp. 237–247.

What are the Best Methods for the Control of Markets, Restaurants, and Bakeries? *Amer. Jour. Pub. Health*, 4 (1914), no. 12, pp. 1208, 1209.

[Sanitary] Regulation of Hotel and Restaurant Kitchens [in Germany]. R. P. Skinner, *Daily Cons. and Trade Rpts.* [U. S.], 17 (1914), no. 123, p. 1117.

The Department of Food Sanitation and Distribution. Dora E. Wheeler, *Women's Munic. League Boston, Bul.* 5 (1914), no. 5, pp. 54–56.

How a Civic League Secured a Clean Milk Supply. Harlean James, *Survey*, 33 (1915), no. 16, pp. 421–422.

Some Results of Periodic Health Examinations. E. L. Fisk, *Pop. Sci. Mo.*, 86 (1915), no. 4, pp. 324–331.

Coöperative Public Health Administration—An Experiment in Small Communities. E. B. Phelps, *Pub. Health Rpts.* [*U. S.*], 29 (1914), no. 39, pp. 2477–2526, figs. 3.

Community Defense of National Vitality. C. E. A. Winslow, *Pop. Sci. Mo.*, 86 (1914), no. 4, pp. 319–324.

How to Keep Your Baby Well. *Washington, D. C., Health Dept.*, 1914, pp. 7. Advice is given regarding the feeding and clothing of infants and similar topics.

The Importance of the Medical Supervision of Older Children. E. J. Wynkoop, *Arch. Pediat.*, 32 (1915), no. 1, pp. 39–43.

Pellagra and the High Cost of Living. *Survey*, 33 (1915), no 16, p. 422.

Report of the Committee on Sanitation. *Nat. Canners Assoc. Ann. Conv.*, 7 (1914), pp. 7. Among the subjects considered are the sanitation of the building site and grounds, buildings, water supply, and similar topics, as well as personal hygiene of the employees.

Sanitation of Canning Factories. In *A Complete Course in Canning, Baltimore, Md.*, 1914. 3 ed., pp. 23–26; *Pure Products*, 10 (1914), no. 6, pp. 274–277. See above.

Educational

School Lessons on Corn. C. H. Lane, *U. S. Dept. Agr., Farmers' Bul.* 617 (1914), pp. 15, figs. 5.

Hot Lunches in Rural Schools. Mary Bull, *4. Internat. Cong. School Hyg., Buffalo, N. Y., Trans.*, 5 (1913), pp. 320–323.

History and Present Status of the School Feeding Movement. Louise S. Bryant, *4. Internat. Cong. School Hyg., Buffalo, N. Y., Trans.*, 5 (1913), pp. 280–284.

Physical Care and Training of Children in European Schools. G. G. Rathmann, *Amer. Phys. Ed. Rev.* 19 (1914), no. 8, pp. 597–609.

Agricultural Home Economics Instruction in Foreign Countries. P. Schindler, *Ann. Sci. Agron.*, 4. ser., 2 (1913), II, no. 6, pp. 727–742. Abs. *Exper. Sta. Rec.*, 31 (1914), no. 1, pp. 97, 98.

Elementary Food Work Brought into Relation with Preparation of Meals. Alice T. Houston, *School Sci. and Math.*, 14 (1914), no. 7, pp. 609, 610.

Miscellaneous

The Boston Floating Hospital. J. H. Young, *Arch. Pediat.*, 31 (1914), no. 10, pp. 753–760.

The Carpet Beetle or "Buffalo Moth." L. O. Howard, *U. S. Dept. Agr., Farmers' Bul.* 626 (1914), pp. 4, fig. 1.

The House Centipede. C. L. Marlatt, *U. S. Dept. Agr., Farmers' Bul.* 627 (1914), pp. 4, figs. 2.

The Dignity of Domestic Service. Anon., *Littell's Living Age*, 7. ser., 65 (1914), no. 3677, pp. 814–816.

Smoke Abatement. J. B. C. Kershaw, *Sci. Prog.* [*London*], 9 (1914), no. 34, pp. 331–346, figs. 2.

Science and the Supply of Fine Cotton. W. L. Balls, *Sci. Prog.* [*London*], 9 (1914), no. 34, pp. 290–309.

BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS if the Journal price is listed.

Textiles. By WILLIAM H. DOOLEY. Boston: D. C. Heath and Company, 1914, pp. 329. $1.25. By mail of the Journal, $1.36.

The teacher of Home Economics always welcomes a good book on textiles, hence the revised edition of *Textiles* with its appendix of nearly one hundred pages is greatly appreciated.

The book itself does not differ greatly in subject matter and organization from the first edition. Beginning with a study of the wool fiber the author carefully consideres every detail of the different processes, from the time the wool is removed from the back of the sheep until it is woven into cloth. This is followed by a woolen and worsted fabrics glossary.

Each of the other fibers is taken up in a similar though somewhat briefer manner, each being followed by a glossary.

The appendix gives interesting information on the history of textiles and the development of the textile industry.

The tests given are in the main elementary and quite suitable for the young student. The method of carrying out each experiment is carefully described and no elaborate apparatus or expensive materials are necessary.

Mr. Dooley with his experience in trade and industrial schools is particularly qualified to write a book of this kind, and teachers in such schools will find the book especially valuable. It also furnishes ideas for the development of courses in industrial history, biology, chemistry, mathematics, etc., in high schools.

Laundry Work in Theory and Practice. By E. L. MARSH. New York: Longmans, Green and Company, 1914, pp. 205. $0.75. By mail of the Journal, $0.83.

Miss E. L. Marsh, staff teacher of the National Training School of Cookery, London, has presented a practical, well planned manual in her new book called *Laundry Work*. The division of subject matter is made clear by carefully dividing the book into chapters, twenty-seven in number. It is very fully illustrated with drawings representing different folds of table linen and body linen, and has many illustrations on the much needed information of laundry equipment. Much of the equipment is quite after the English pattern, which is different from our American type, but is especially

helpful to students training for work in other localities. The book is most explicit, very detailed, and the facts are so plainly given that it should be of great service as a reference book to all teachers of laundry work.

Insects Injurious to the Household and Annoying to Man. By GLENN W. HERRICK. New York: The Macmillan Company, 1914, pp. 461. $1.75. By mail of the Journal, $1.90.

Housewives and teachers of Home Economics are greatly indebted to Professor Herrick of Cornell University for this authoritative volume, with one hundred and fifty original illustrations. These show the distinctive characteristics that will ensure recognition.

Through these pages the reader is introduced to practically every insect which injures the human body, clothes and other textiles, or food materials in all sections of the country. We make their acquaintance in their usual breeding places through their preferred food, during their rapid reproduction, and through the distinguishing characteristics of the least, as well as of the most harmful forms.

With these facts in mind, special emphasis is put upon methods of prevention. Yet, as insects are both wise and wary, the author gives in detail the best methods of extermination.

The bibliography is extensive, including references published as early as 1773.

While there is occasional repetition it is not frequent nor tiresome and the only omission that occurs to the reviewer is the need for watching unused fireplaces and chimney flues, which often let in that mysterious "swarm of flies." Screened chimney-tops may well be added to the other screened openings.

A chapter on human parasites and another about insects which annoy chiefly in the fields and woods add to the practical use of the volume.

The final chapter gives all necessary details for "safety first" and success afterward, in the use of the three gases, hydrocyanic acid, carbon bisulphide and sulphur dioxide.

With this book in the libraries and the homes the "What Shall I Do?" letters in regard to insects will be few, health and comfort greatly increased and waste of property much diminished.

1001 Tests of Foods, and Toilet Accessories. By H. W. WILEY. New York: Hearst International Library Company, 1914, pp. xxviii+249, pl. 1. $1.25.

This volume, arranged by Anne L. Pierce, contains an introduction, "The pure food battle, looking backward and forward," a "Key to method of rating products," and a classified list of the results of the examination

of foodstuffs, beverages, and cosmetics, with comments on quality. Much information is included regarding the presumable composition of such materials. A full index is provided.

Analysis and Cost of Ready to Serve Foods. By F. C. GEPHART AND GRAHAM LUSK. Chicago: Press of American Medical Association, 1915, pp. 83. $0.50. By mail of the Journal, $0.56.

This book presents the results of a study of the composition, energy value, and cost of the different portions or "orders" of food served in the Childs restaurants in a number of the large cities of this country. Approximately 350 different "orders," as they were served to patrons, were purchased and analyzed in the laboratory, these representing practically all the "orders" offered by the restaurants. The data accumulated in this investigation are discussed at length and presented to the reader in tabular form. The following information is given regarding each "order:" Its cost; the weight of its food constituents; the total number of calories of energy furnished, and the actual amounts and proportion of this energy supplied by the protein, carbohydrates, and fat constituents of the food; and the number of calories obtained for 5 cents. One table shows the cost of the portion as served; the estimated cost of the ingredients constituting the portion; the total number of nutritional calories furnished by the portion with the number obtainable for 5 cents; and the cost of 2500 calories when furnished by the portion. In another table the different "orders" are grouped according to the energy which they furnish.

In an introduction to the publication Prof. Graham Lusk discusses the importance of this work in relation to some principles of nutrition, especially the value of the flavor of food, the importance of its composition, and the quantity of food required, which he considers somewhat at length.

Spices: Their Nature and Growth. By MCCORMICK AND COMPANY. Baltimore, Md., 1915, pp. 32, paper. $0.25.

Information is given concerning the growth, preparation and use of spices, vanilla and tea. Colored illustrations show the plants and berries.

A copy of the booklet will be sent free to any bona fide teacher of domestic science upon presentation of credentials.

A Second Course in Homemaking. By MABEL HYDE KITTREDGE. New York: The Century Company, 1915, pp. 249. $0.80. By mail of the Journal, $0.88.

In this second book Miss Kittredge prefaces the lessons with a brief review of the subject matter in her *Practical Homemaking*. The lessons then begin with one on preserving, so that the canning and preserving may

be done when school first opens, before the fruit season is over. The lessons following are on City Refuse, Laundry Work, Baking, Division of Income, Marketing, Care of Children, Food for Infants and Children, Hot Weather Problems, and the book concludes with good tables of weights and measures and about two hundred pages of inexpensive recipes.

The material presented is practical, and yet it should be presented very carefully by the teacher or much of its value will be lost.

As in the previous book the emphasis put on sanitation is most valuable and gives the teacher a good opportunity to make a connection between home problems and civic problems. The chapter on diet is excellent, although for many housekeepers in the average workingman's home the sentences might be simplified with great advantage. This is also true of the chapter on Division of Income although this chapter presents some practical lessons on the advantage of systematic accounts. The chapter on Marketing gives very practical directions. Discretion in presenting the chapter on Care of Children would obtain the best results. One of the best chapters in the book is the one on Food for Infants. The lesson on Food for Children should have practical bearing on the health of children. The Hot Weather chapter is another example of concentrated wisdom. The pages devoted to Inexpensive Recipes are particularly helpful. There are several pages of recipes for Italian families and several of kosher recipes. In general the book shows a thorough and practical knowledge of the homemaker's needs, and the subject is treated in the firm and decisive manner that is the result of such knowledge.

Your Household Budget in Graphic Form. By EMMA A. WINSLOW. Department of Household Administration, Teachers College, New York City, 1914, paper. $0.15.

This is a folder (8″ x 15″ when open) furnishing a series of graphic charts for receipts and for expenditures for food, operating expenses, shelter, clothing, and the higher life. Each chart is ruled vertically and horizontally so that entries can be made for each month of a year corresponding to the amount received and the amounts spent for various purposes.

The "budget line" is drawn across each chart at the beginning of the year to indicate the standard monthly sum estimated; the actual sums received and expended month by month are then entered according to the scale, resulting in a line across the chart which expresses the actual expenditure which can thus be compared with the budget allowance. The charts will appeal to teachers of household budgets and accounts as a valuable teaching method, and should be found useful by housewives who are using or wishing to use a budget system.

NEWS FROM THE FIELD

Central Association of Science and Mathematics Teachers. The fifteenth annual meeting of the Central Association of Science and Mathematics Teachers will be held in Chicago in the new building of the Harrison Technical High School on November 26 and 27, 1915. On the programs of the section meetings in Agriculture, Biology, Chemistry, Earth Science, Home Economics, Mathematics, and Physics are prominent educators who will discuss some of the present-day problems of the secondary schools. In the general sessions addresses will be given by Alexander H. Revell, Chicago, merchant, and director and trustee of numerous educational institutions; William B. Ittner, St. Louis, architect of the Board of Education of St. Louis; Cyril G. Hopkins, professor of agronomy, University of Illinois; Earle R. Hedrick, professor of mathematics, University of Missouri; and Edward H. Steiner, sociologist, Grinnell College, Iowa. All teachers are cordially invited to attend this meeting.

Visiting Housekeeping. Under the auspices of the New England Home Economics Association a committee to extend the teaching of housekeeping in the homes has begun a study of Instructive Visiting Housekeeping. In order to learn where and how this work is being done, they have prepared for distribution a questionnaire consisting of a number of questions under each of the following headings: History, Types of Work, Types of Families, Methods of Work, Finances, After-Care, Extension, Request.

Further information and copies of the questionnaire may be obtained from Miss Annie L. Weeks, Associated Charities, 763 Massachusetts Ave., Cambridge, Mass.

Visiting Nursing. The Boston Instructive District Nursing Association, with Simmons College and the School for Social Workers, offers a course of eight months for graduate nurses wishing to prepare for public health nursing in its various branches, including infant welfare work and municipal and rural nursing. During the past few years there has been a very noticeable increase in the demand for nurses equipped for all forms of visiting nursing—in factory and other industrial welfare work, school nursing—and for hospital social service. In addition the widespread interest in preventive measures for tuberculosis, infant welfare and mental hygiene is adding constantly to the demand for nurses in educational and

preventive work under state and local boards of health, or private agencies in cities, towns and rural communities. Applicants must be graduated from a nursing school, giving at least two consecutive years in a general hospital and also giving maternity training; and must be registered nurses. They must also have had at least a high school training or its equivalent. The course began September 22, 1915, and will end June 9, 1916, with holidays at Christmas and in the spring. Three-fourths of the students' time is given to work at Simmons College and the School for Social Workers and one-fourth to practise work with the Instructive District Nursing Association.—*School and Society.*

State Supervisor of Household Arts in Indiana. Under the operation of the new Vocational Education law in Indiana, a state supervisor of Household Arts has been added to the staff of the Vocational Division of the State Department of Public Instruction, with offices at Indianapolis. Miss Adelaide Steele Baylor, who has been the general assistant in the State Department of Public Instruction, and Clerk of the State Board of Education, has been appointed to this position.

Miss Baylor is visiting schools in various parts of the country before she takes up the duties of her office in October.

Other states having some form of state supervision of household arts instruction are: Illinois, Louisiana, Massachusetts, New York and Wisconsin.

Provincial Director of Home Economics. In January, 1915 the Department of Education of Saskatchewan, Canada, appointed Miss F. A. Twiss, Director of Household Science for that province. Miss Twiss has her office in the Normal School, Regina, and is at present giving much attention to the work in rural schools.

The appointment of similar directors, or provincial inspectors, in other provinces will doubtless follow just as in several of the states, notably Wisconsin, Indiana, Maine, New York, Louisiana, and Illinois, there is a state inspector or supervisor of Home Economics.

Utah Home Economics Association. At a meeting called last spring the matter of a standard state course for high schools was taken up. The committee which had been working at this presented a course which was adopted, and which will be used the coming year in the schools. A discussion was held upon the requirements of teachers of Home Economics, but it was decided to defer action until the next regular meeting. The committee upon revision of the constitution tendered to the Association a revised constitution, which was adopted. Various other matters of

interest were taken up. Committees were appointed to standardize the score cards to be used in judging Home Economics products and also a committee was appointed to select the best text books for domestic science and domestic art.

This Association includes in its membership many of the women of the state who are not teachers, and who have given some very valuable advice in the line of Home Economics.

Santa Barbara Home Economics Association. During the summer session the branch held weekly meetings every Thursday afternoon at which interesting reports were made of the work given in Home Economics in the various schools throughout the country which were represented by the summer school faculty and students. It is planned to include similar meetings throughout the year.

Field Work at Teacher's College. An interesting feature of household arts' at Teachers College is the field work conducted by graduate and undergraduate students; in connection with regular class work many of the younger students have also taught throughout the year in the settlements of Upper New York, this work being organized by the Y. W. C. A. in coöperation with the department of household arts education. This work has not been for credit, but it is of great value to the pupils in that it gives them a live problem and a social outlook as a preliminary to the more formal practice teaching in the school. Graduate students have been working out assigned problems in the housekeeping centers connected with the public school, and others have superintended the teaching of classes of backward girls in one of the public schools after school hours. Prevocational and vocational education are being instituted in New York City and this gives qualified students an opportunity to study this type of education during its inception. Under Miss Cooley's supervision students have been working regularly in Public School 62 with prevocational classes. One graduate student has conducted a most interesting piece of work in connection with other work at the School of Philanthropy in investigating the dietaries of a group of women who are tenement dwellers, and most of whom have recently come to this country. The list of all such activities would be too long for publication; but these brief notes show how opportunities in a city like New York may be used in connection with educational work.

It may seem strange to the casual observer that a city college should undertake rural work. While it may not seem the best possible division of labor, this line of work has been forced upon Teachers College by the demands of its students. Not only in the summer but during the winter many courses are given which are taken by county superintendents and

other supervisors, as well as by teachers. There is a group of courses in Rural Education with Prof. Richard E. Dodge as adviser, and a diploma in this field will be granted. The department of household arts education offered a summer course in household arts in rural schools, conducted by Miss Spohr, who is familiar with rural conditions. Opportunities for field work are not so far distant from Teachers College as might at first seem, as a short journey will lead one to a district where the rural school is found and where lectures may be given to a woman's club.

Dr. Warren R. Wilson gives a course of lectures in Rural Sociology and conducts a seminar. Dr. Winslow has taken groups of his students on an automobile trip to rural schools in Dutchess County.

A College for Teachers at the Johns Hopkins University. Another step towards the realization of a teachers' college in Baltimore was taken in the recent creation of the degree of Bachelor of Science in Education, by the Johns Hopkins University. This marks a partial fulfillment of the hopes which the University has entertained for years. As early as 1910, the University announced its desire of establishing a department for the higher training of teachers as an organic part of the University.

The curriculum leading to the new degree will be based on the College Courses for Teachers and the Summer Courses. The former, which were established in 1909, are conducted during the regular session in the afternoons and on Saturdays. The latter have been conducted since 1911. The new degree will be open to men and women on equal terms. In the Summer Course, work in Home Economics will be a part of the new department. The regulations concerning matriculation and the curriculum will be determined by a special advisory committee of the faculty. The title of Director of these courses has been assigned to Prof. Edward F. Buchner, who organized and has conducted both of these branches of the University's activities.

Nurses Associations. The American Nurses' Association, The National League of Nursing Education, and The National Organization for Public Health Nursing held a combined meeting and individual meetings at San Francisco June 20–25.

At the general session for all these associations, well known medical men, nurses and educators discussed these important subjects: Visiting and Household Nursing, Coöperation between Nurses' Training Schools and Other Schools, The Contribution of the Medical Profession to Nursing Education, Administration of Registration Laws, The Nurses' Part in Infant Welfare Work.

These subjects were subdivided and others taken up at the meetings of the individual associations.

The Penny Lunch. A teacher in New York writes as follows concerning the school lunch work in which she was engaged last winter.

"The lunch room work was inaugurated as a help for the poor, during the winter months. The work is good practice in buying and cooking in large quantities. All our regular work in cookery has stopped temporarily, and the children in the cookery classes help to prepare the food for the lunches. This is an admirable opportunity to adjust oneself to circumstances.

"Our average number of servings is 350 per day, but we have served as many as 550 on some rainy days. Our menu each day is a soup or cocoa, stewed fruit, bread and rolls, making a total cost of three cents for the lunch.

"The kindergarten children come to us at eleven thirty. The girls who are in the cooking classes at that hour take charge of these children. Each girl mothers one of the little ones, sees that the child's tray is filled, and then takes it to our second kitchen where the children are seated and fed.

"The other children come to us at twelve. They are served and go with their trays to the class rooms on the same floor with the kitchens."

Baby Week. The Civics, Home Economics and Public Health Departments of the Federation of Women's Clubs, in coöperation with the Federal Children's Bureau, are to have a Baby Week from March 4 to 11, 1916. The Children's Bureau are offering plans and suggestions for this baby campaign.

Details will be found in the General Federation Magazine for November.

University of Chicago. Prof. Julius Stieglitz of the Department of Chemistry of the University of Chicago has been made chairman of the department to succeed Prof. John Ulric Nef, whose sudden death occurred in California in August. Those Home Economics students who have studied with Prof. Stieglitz either in organic chemistry or advanced food work owe much to his clear, concise methods, and have the greatest respect for him both as a teacher and investigator.

Brief Notes. The National Association of Corporation Schools held its third annual convention in Worcester, Mass., June 8–11. Reports were given by the committees on Trade Apprenticeship Schools, Special Apprenticeship Schools, Accounting and Office Work Schools, Advertising, Selling and Distribution Schools, Hygiene, Health and Coöperation, Employment Plans, and Vocational Guidance as a Scientific Study.

Miss Farmer's School of Cookery is now being conducted by Miss Alice Bradley. The fall term opened October 4; the winter and spring terms will open January 2 and March 14, respectively.

Prof. Kathryn Gordon, B.S., Simmons College, 1915, has accepted the chair of Household Economics in Franklin College, Indiana.

The books, *Selection and Preparation of Food* and *Food and Nutrition* by Miss Isabel Bevier have recently been revised. *Food and Nutrition* may now be obtained from Whitcomb and Barrows, Huntington Chambers, Boston, Mass., and *Selection and Preparation of Food* will be ready shortly.

Salaries received by young women graduates of the Home Economics course of the University of Wisconsin range from $750 to $1000 for the first year's work, up to $1500 for the third year of employment.

Miss Eloise Parsons of Clarinda, Iowa, is the young woman whose record in the Department of Agriculture's garden and canning clubs was the best of the thousands made by members in the 33 northern states. Miss Parsons obtained a yield of 5318 pounds of tomatoes from her tenth-acre plat. Her costs were $15.61, and her net profits were $115.57. Her costs cover every item of expense in raising the crop, including rent of land, her own time (estimated ar 10 cents an hour), fertilizers and sprays.

A weekly weather forecast designed especially to aid farmers in planning their farm operations and shippers of perishable products to handle their goods with reference to expected weather conditions, has been inaugurated by the United States Weather Bureau. The bureau also has arranged a system whereby the forecast is taken Tuesday and reaches the weekly newspapers, especially in the corn, wheat and cotton districts, by mail on Wednesday morning—which is in time for the greatest number of them to use the information in their weekly editions.